

March 18, 2022

**TRANSMITTED VIA ELECTRONIC MAIL**  
**[aschwartz@ci.chehalis.wa.us](mailto:aschwartz@ci.chehalis.wa.us)**

Amelia Schwartz, City Planner  
Lewis County Building and Planning Department  
1321 S. Market Boulevard  
Chehalis, Washington 98532

**Re: Chehalis Industrial Park Warehouse Facility with Parking  
SEPA-21-0013 and ST-21-0013  
Project Location: 2844 Jackson Highway  
Tax Parcel Nos.: 017800-00-1009 / 017800-00-1010 / 017800-00-3000  
Applicant's Response to Public Comment**

Dear Ms. Schwartz:

This firm represents the property owner, Puget Western, Inc. ("PWI" or "Applicant") regarding the above-referenced proposal ("Project"). This letter provides the Applicant's responses to public comments received on the October 26, 2021 Notice of Application for the Project, including revised and supplemental reports and information, which are listed in full on the last page. As noted on the list, a revised SEPA Checklist for the Project is also attached (**Attachment 5**).

**A. Twin Transit (10/25/2021)**

Summary of Comment: Twin Transit requested clarification of the proposed access location for the Project, expressed preference for potential alternative access over Port property to Rush Road, and noted that bus pullouts would be needed on Jackson Highway.

Applicant's Response: The proposed site access is via two driveways extending southwest to Jackson Highway. The Applicant does not currently have legal access over and across Port of Chehalis property for the potential alternative access to Rush Road. In response to review comments, the Applicant has prepared an updated and revised Traffic Impact Analysis ("TIA") (Heath & Associates, February 22, 2022) for the Project, which is attached as **Attachment 1**. The revised TIA proposes adding a left-turn lane at Rush Road and Jackson Highway as well as constructing a two-way left-turn lane along the length of the Project frontage, which will address the agency's concerns regarding stopped traffic accessing the Project driveways impairing bus travel. The revised TIA also identifies a need for up to two bus pull-outs on the Project frontage. The Applicant will work with Twin Transit and Lewis County to determine the final location and design of these pull outs.

**B. Hillcrest Water Association (11/7/2021)**

Summary of Comment: The Association expressed concern that proposed fill of the Project site for development will cause flooding of the Association's adjacent pumps during the rainy season and asked about the provider of water service for the Project.

Applicant's Response: With existing conditions, stormwater runoff to the Project site does not infiltrate and is discharged off the site as surface flow. With the proposed development and fill, the existing hydrology will be maintained by treating, detaining, and then discharging the stormwater offsite via an existing open channel. As such, the Applicant's geotechnical engineer does not expect that the development will meaningfully impact surrounding groundwater elevations or otherwise contribute to flooding. A February 28, 2022 Design Memorandum from Terra Associates, Inc. confirming the same is attached as **Attachment 2**. The Applicant expects to use the City of Chehalis water system and has applied for a Certificate of Water Availability for the Project.

**C. Lewis County (11/9/2021)**

Summary of Comment: Retention of survey markers, request for revised Traffic Impact Analysis ("TIA") submittal including turn-lane warrants and Jackson Highway/Rush Road intersection mitigation, requirements for access and floodplain development permits, requirement for compliance with storm drainage and erosion control codes, requirement for decommissioning of existing wells.

Applicant's Response:

The Applicant notes comments pertaining to retention of survey markers and required access and floodplain permits. With respect to flood mapping, the Applicant has proposed a map amendment to the Corps of Engineers, which is still under review.

A revised TIA has been prepared (**Attachment 1**) incorporating the revisions requested by this comment and will be submitted for County review. The turn-lane warrant analysis identified a need for a left-turn lane at Jackson Highway and Rush Road; the Applicant plans to construct this improvement and also provide a left-turn lane along the length of the Project frontage. The revised TIA shows that a right-turn lane is not warranted. The civil plans for the Project (**Attachment 3**) have been updated to incorporate the left-turn lane improvement.

Project stormwater design meets the requirements of Chehalis Municipal Code ("CMC") identified in the comment.

The Applicant has not identified any wells on site; if wells are identified during excavation they will be decommissioned.

**D. Southwest Clean Air Agency ("SWCAA") (11/8/2021)**

Summary of Comment: compliance with regulatory requirements for asbestos removal and construction dust is required.

Applicant's Response: The Applicant completed asbestos abatement from the existing structures between January and March 2018 following issuance of required permits and approvals from SWCAA. The buildings are expected to be demolished once permits are issued. The Applicant will comply with all noted regulatory requirements for management of construction dust through implementation of a Temporary Erosion Control Plan and associated controls and monitoring.

**E. Department of Ecology (11/9/2021)**

Summary of Comment: Addresses requirements for lawful disposal of construction debris, erosion control, NPDES construction stormwater permitting, NPDES industrial discharge permit coverage, and dam safety construction for stormwater facilities.

Applicant's Response: The Applicant will comply with all applicable regulatory requirements described in the comment. A dam safety permit is not required because all stormwater detention proposed will be located underground.

**F. Quinault Tribe (11/15/2021)**

Summary of Comment: Describes federal Section 106 review under the National Historic Preservation Act (NHPA) and cultural resource study information.

Applicant's Response: The Applicant will comply with all federal permitting requirements and associated Tribal consultation and review required under Section 106. Cultural resources studies completed for the Project to date for the Section 106 process are listed on the revised SEPA checklist.

**G. Ms. Jennifer Robertson, Esq., Inslee Best (11/8/2021)**

Summary of Comment: Commenter represents Myrna Brossard (2833 Jackson Hwy), believes SEPA checklist is incomplete in various respects; concerns about analysis of and impacts associated with wetlands, stormwater, filling and grading, wildlife, traffic, aesthetics, noise, light and glare; concerns regarding adequacy of project and use description; believes an EIS is warranted.

Applicant's Response:

As a preliminary matter, the Applicant notes that Ms. Brossard's single-family residence is located on property that is currently zoned for General Commercial ("C-G") use. Many of Ms. Robertson's comments are directed towards impacts of the Project to the existing single-family residential use of Ms. Brossard's property, which is a legally nonconforming use. In contrast, the Applicant's proposed development is permitted outright in the I-L zoning district. *See* Chehalis Municipal Code ("CMC") 17.72.010 and 17.78.020 (Use Tables). An excerpt from the City's zoning map showing the Applicant's Property and adjacent properties is attached as **Attachment 4**.

Adequacy of SEPA Checklist. A revised SEPA checklist is attached as **Attachment 5**, which includes additional information and revised responses. The commenter requests that the City provide an additional comment period if the SEPA checklist is supplemented; however, the City's code does not provide for an additional comment period on the Notice of Application. *See* CMC 17.09.100. Since the City did not issue a SEPA threshold determination concurrently with the Notice of Application, an additional 15-day comment period will be available after the SEPA threshold determination is issued. *See* CMC 17.09.110B.

Wetlands. The Applicant previously submitted a critical area study of wetlands and associated habitat required by CMC 17.23.020 for the Project (Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan – Soundview Consultants, October 10, 2020). Attached at **Attachment 6** is a detailed response from Soundview Consultants, dated February 24, 2022, to wetland and habitat comments received on the Notice of Application. To the extent the comment raises concerns regarding potential flooding resulting from filling of wetlands, the development will not alter existing hydrology, and the Applicant's geotechnical engineer does not expect that the development will meaningfully impact surrounding groundwater elevations or otherwise contribute to flooding. *See* **Attachment 2**.

Stormwater. The Project is required to design and construct stormwater facilities according to applicable federal, state, county, and city standards. These standards include directing onsite stormwater to a treatment and detention system and treating stormwater to advanced water quality standards in accordance with DOE standards. With the Project, stormwater will be detained and released at or below predeveloped conditions. Overall, development can be expected to result in improved management of stormwater quality and runoff levels from existing conditions. The Applicant notes that under SEPA, the City is entitled to rely on existing plans, rules, regulations, and laws to mitigate probable adverse impacts. *See* RCW 43.21C.240(2)(a); WAC 197-11-158(2).

Filling and Grading. As with stormwater, the Project is required to comply with applicable federal, state, county, and city standards for filling and grading the Property. These include, but are not limited to, the requirements of CMC Ch. 15.28 (Land Disturbing Activity) and federal and state permits required for the proposed fill of wetlands (addressed above). With respect to the commenter's concerns regarding construction traffic associated with dump trucks, the Applicant must comply with the City's adopted Engineering Development Code during construction, which includes requirements for temporary traffic control following the guidelines of the WSDOT/APWA Standard Specifications. *See* CMC 12.04.040. As noted above, under SEPA, the City is entitled to rely on existing plans, rules, regulations, and laws to mitigate probable adverse impacts. *See* RCW 43.21C.240(2)(a); WAC 197-11-158(2). A surface mining permit is not required under CMC 17.72.100C because the Project is not a surface mine or intended to remove minerals, and on-site construction is exempt from the DNR permit requirements identified in the comment.

Wildlife. The Applicant previously submitted a critical area study of wetlands and associated habitat required by CMC 17.23.020 for the Project (Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan – Soundview Consultants, October 10, 2020). Remaining comments are addressed in the response attached as **Attachment 6**.

Traffic. The revised TIA for the Project generally addresses concerns raised in this comment (**Attachment 1**). The Applicant notes that while the commenter is correct that traffic will increase with the Project, all intersections will operate at or above the County's adopted standard of LOS "D" for local roadways at full buildout. *See* Lewis County Comprehensive Plan, Transportation Element, at T-8 and Att. 1, at 16. As noted above, with respect to dump-truck traffic, the Applicant must comply with the City's adopted Engineering Development Code during construction, which includes requirements for temporary traffic control following the guidelines of the WSDOT/APWA Standard Specifications. *See* CMC 12.04.040. Roadway construction must also comply with City standards, including maximum load design. *See* CMC Ch. 12.04 (Engineering Development Code), Art. III. With respect to dust and erosion control, both CMC 12.04 and CMC 15.28 impose applicable standards. Finally, the Applicant does not currently have legal access over and across Port of Chehalis property for the potential alternative access to Rush Road, although that access is analyzed in the revised TIA.

Aesthetics. The commenter's characterization of the immediate land uses in the Project is incomplete. The properties immediately to the south and west of the Project are zoned for Light Industrial use and are currently undeveloped but are not designated as permanent "open space" or other conservation status. In addition, several of the properties immediately across Jackson Highway from the Project currently developed with single-family residences are zoned C-G ("General Commercial"), including Ms. Brossard's. These existing single-family uses are legally nonconforming. *See Attachment 4*. The City should evaluate the aesthetic impacts of the Project relative to the current commercial zoning of the Property, as opposed to the existing nonconforming residential land uses, as nonconforming uses are generally disfavored in Washington law. *City of Univ. Place v. McGuire*, 144 Wn.2d 640, 30 P.3d 453 (2001).

The Applicant has prepared concept renderings of the Project with elevations for City review, which are attached as **Attachment 7**. As depicted on the renderings, the proposed building will be no more than 50-feet tall at its highest point. The maximum permitted height for the adjacent C-G zoned properties across Jackson Highway is 50 feet. *See* CMC 17.63.020. The maximum permitted height for the subject Property and the adjacent I-L zoned properties is 100 feet. *See* CMC 17.72.020. Building setbacks and required landscaping will provide a visual buffer from Jackson Highway to the Project. Finally, there are no protected views over and across the Applicant's Property from adjacent residences in adopted City or County codes, policies, or regulations, as would be required for the City to exercise its substantive authority to condition or deny the Project on that basis. WAC 197-11-660(1)(b); *see also Cougar Mountain Assocs. v. King Cty.*, 111 Wn.2d 742, 765 P.2d 264 (1988).

Noise. A Noise Study is being completed for the Project and recommended mitigation measures to reduce noise from warehouse operations to authorized regulatory levels will be incorporated into final project design to mitigate noise impacts if identified. The Project will also comply with state noise regulations identified in the comment. *See* WAC 173-60. As noted above, the City is entitled to rely on existing plans, rules, regulations, and laws to mitigate probable adverse impacts. *See* RCW 43.21C.240(2)(a); WAC 197-11-158(2).

Light and Glare. The window glass used in the building will be non-glare and parking lot lighting will be shielded and directed towards the Project site as required by City codes. *See*

CMC 17.84.080. The use of onsite landscaping will also help to contain any light produced by the development. In addition, a detailed lighting plan will be prepared in conjunction with construction permitting, including a photometric analysis to ensure that the lighting plan conforms to all applicable City standards and avoids spillage onto adjacent residential properties.

Land Use Issues. The Applicant submitted a description of the proposed use on November 3, 2021, which is posted on the City’s website for the Project (<https://www.ci.chehalis.wa.us/building/sepa-21-0013-st-21-0013>). The Applicant’s proposed development is permitted outright in the I-L zoning district. See Chehalis Municipal Code (“CMC”) 17.72.010 and 17.78.020 (Use Tables). No additional land use permitting is required.

Requirement for an EIS. The proposed Project is located on industrially zoned property within the UGA for the City of Chehalis as designated in Lewis County’s approved Comprehensive Plan. Under the state Growth Management Act (“GMA”) (RCW 36.70A), UGAs are areas where urban growth such as the proposed Project is encouraged. See RCW 36.70A.110. Further, under the GMA, the City is entitled to rely on existing plans, rules, regulations, and laws to mitigate probable adverse impacts of development. See RCW 43.21C.240(2)(a); WAC 197-11-158(2). Finally, despite the commenter’s reference to the size of the Project, it is well-settled under Washington law that the size of the Project, without more, does not require an EIS. See *Moss v. City of Bellingham*, 109 Wn. App. 6, 20, 31 P.3d 703, 711 (2001) (noting that “the MDNS has found favor with courts and decision makers as ‘conducive to efficient, cooperative reduction or avoidance of adverse environmental impacts.’”) (internal citations omitted).

**H. Mitch Williams (11/7/2021), Bruce and Donna Stewart (11/9/2021), Pari Johnson (11/3/2021 and 11/9/2021), Catherine Moczowski (11/9/2021), Darcie Lampert (11/9/2021), Kay Brossard (11/9/2021), Gary Hallenbeck (11/8/2021), Janice Elder (11/7/2021), Justin and Jessica Armistead (11/9/2021)**

Summary of Comments: The above commenters express similar concerns regarding Project traffic, placement of fill, adequacy of responses on the SEPA checklist, potential flooding, noise, and light impacts, impacts to Hillcrest Water Association systems, desire for alternative access over Port of Chehalis property, opposition to the proposed warehouse distribution use, desire to see the Property rezoned for residential use, and several incorporate Ms. Robertson’s preceding comments by reference.

Applicant’s Response: The substantive issues raised in these comments are fully addressed by the Applicant’s preceding responses. To the extent that the comments reflect opposition to the Project or the proposed use, the Applicant notes that under Washington law, “community displeasure” is not an adequate legal basis to deny the proposal. *Maranatha Min., Inc. v. Pierce Cty.*, 59 Wn. App. 795, 805, 801 P.2d 985, 992 (1990).

Thank you for the opportunity to respond to public comments on the Notice of Application. Should the City require additional information to process the application, please do not hesitate to contact me directly.

Yours very truly,



Heather L. Burgess

HLB/dlg

cc: (via email only w/o attachments)

Joel Molander, ([joel.molander@pugetwestern.com](mailto:joel.molander@pugetwestern.com))

Ben Eldridge, Sr. Project Manager, Barghausen Consulting Engineers

([beldridge@barghausen.com](mailto:beldridge@barghausen.com))

Erin L. Hillier, Chehalis City Attorney ([erin@centerstlaw.com](mailto:erin@centerstlaw.com))

#### Attachments

**Att. 1** – Revised Traffic Impact Analysis (“TIA”) (Heath & Associates, February 22, 2022)

**Att. 2** – Design Memorandum (Terra Associates, Inc., February 28, 2022)

**Att. 3** – Revised Civil Plan Set (Barghausen Consulting Engineers, March 11, 2022)

**Att. 4** – Excerpt of City Zoning Map of Properties

**Att. 5** – Revised SEPA Checklist (March 18, 2022)

**Att. 6** – Technical Memorandum, Response to SEPA Comments (Soundview Consultants, February 24, 2022)

**Att. 7** – Concept Architectural Renderings (Clayco, February 18, 2022)

**Attachment 1**

Traffic Impact Analysis prepared by Heath & Associates  
Dated February 22, 2022





JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

*Lewis County, WA*



02/22/2022

Prepared for: Mr. Joel Molander  
Puget Western, Inc.  
P.O. Box 1529  
Bothell, WA 98011

*Updated*  
February 2022

JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

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# JACKSON HIGHWAY WAREHOUSE TRAFFIC IMPACT ANALYSIS

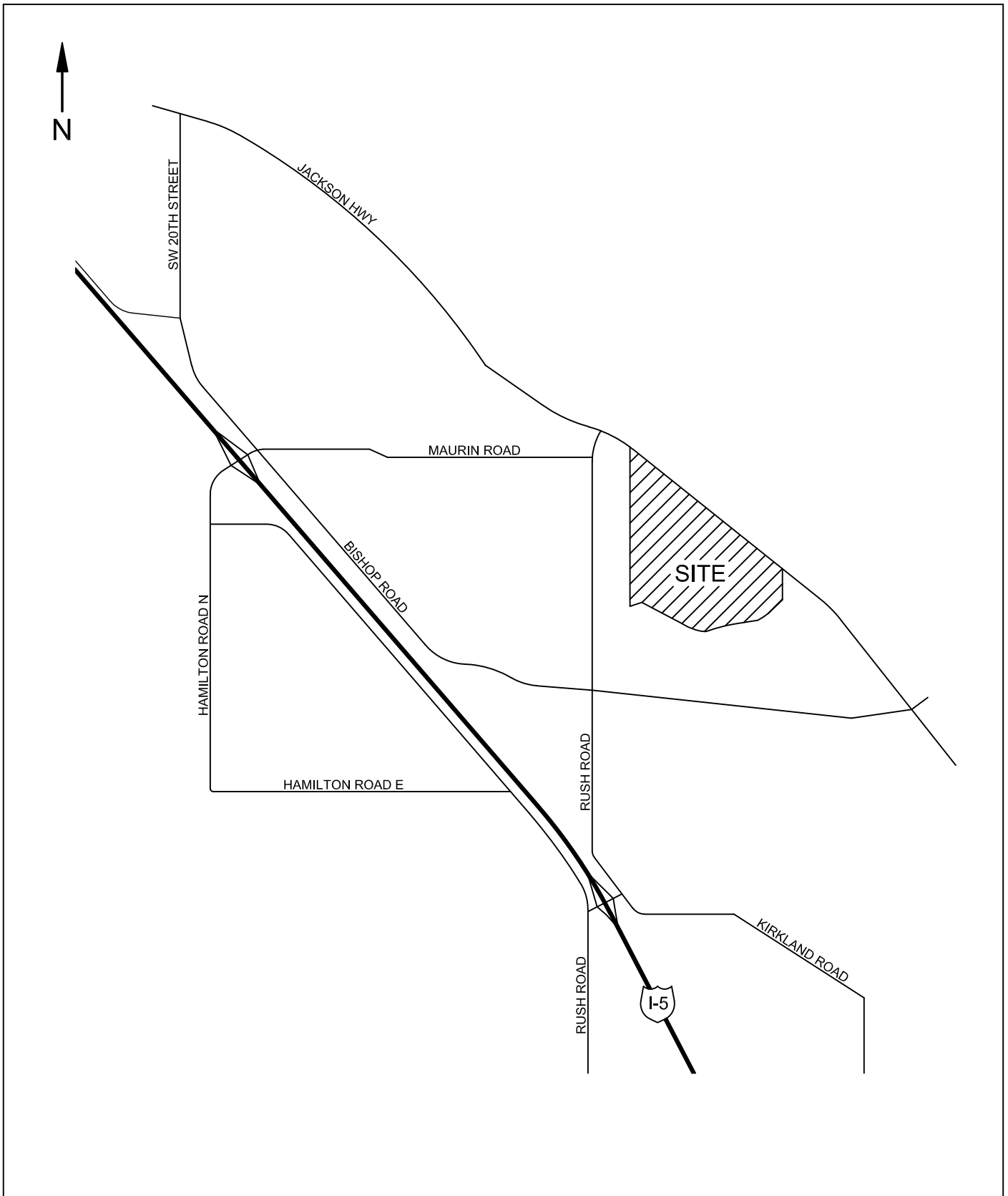
## 1. INTRODUCTION

The intent of this Transportation Impact Analysis (TIA) is to provide an update to the original TIA (December 7, 2020) based on Lewis County's SEPA Comment Letter (November 9, 2021) requesting further evaluation with respect to Jackson Highway & Rush Road intersection. See appendix for comment letter for reference. Additional field counts were taken during the requested AM timeframe to provide additional intersection operation and left-turn assessments. This report is a continuation and uses data from the original report.

## 2. PROJECT DESCRIPTION

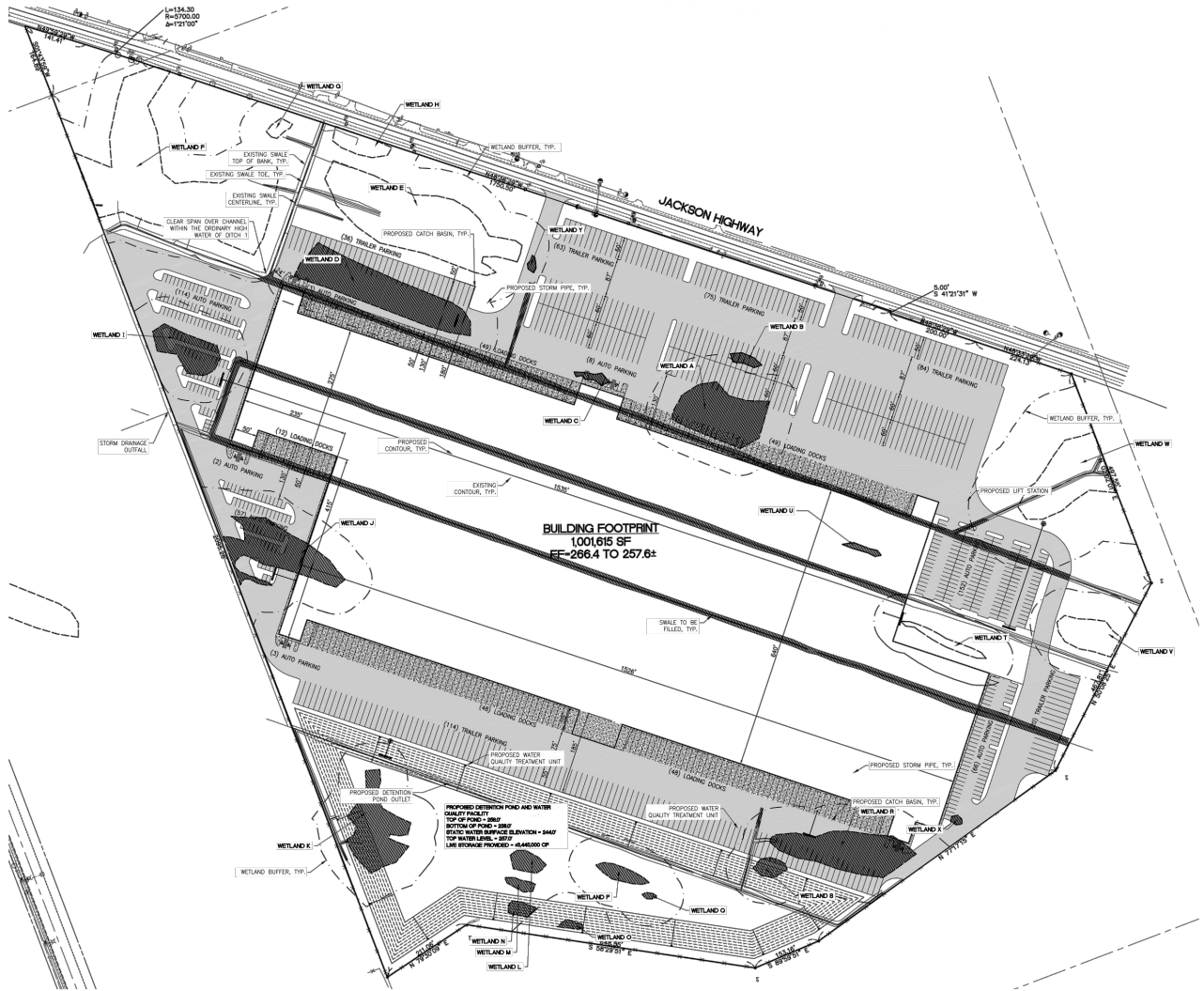
Jackson Highway Warehouse is a proposed 1,001,615 square foot industrial building located in the Chehalis Urban Growth Area of Lewis County. The subject property is bordered to the northeast by Jackson Highway on a cumulative 69.64-acres within tax parcel #'s: 01780000-1009; -3000; & -1010. The lot is largely undeveloped with the exception of a few on-site structures near the east end of the property which are to be removed for new construction. Access to the site is proposed via two driveways extending southwest from Jackson Highway. Also considered, is an alternative scenario with a third access point by way of an easement to Rush Road, opposite Maurin Road. Illustrated below is an aerial image demarcating the subject lot boundaries. Figure 1 on the following page identifies the adjacent street system and general project vicinity. A conceptual site plan of the project is presented in Figure 2.





**HEATH & ASSOCIATES**  
 TRAFFIC AND CIVIL ENGINEERING

**JACKSON HIGHWAY WAREHOUSE**  
 VICINITY MAP & ROADWAY SYSTEM  
 FIGURE 1



HEATH & ASSOCIATES  
TRAFFIC AND CIVIL ENGINEERING

JACKSON HIGHWAY WAREHOUSE

SITE PLAN  
FIGURE 2

### 3. EXISTING CONDITIONS

#### 3.1 Existing Roadway Characteristics

The main arterial serving the subject site is listed and described below.

*Jackson Highway:* is a northwest-southeast, two-lane arterial bordering the subject site to the northeast. Travel lanes are approximately 11-feet in width. Shoulders are composed of paved segments 4- to 8-feet in width. No non-motorist facilities are present in the area. The roadway has a posted speed limit of 40 mph in the vicinity of the subject site.

#### 3.2 Pedestrian and Bicycle Activity

During field observations, no non-motorist transport was observed along Jackson Highway. The area is rural in nature with limited walkable amenities. No significant increase with respect to non-motorist transport would be expected from the development given the limited non-motorist infrastructure in the vicinity of the subject site.

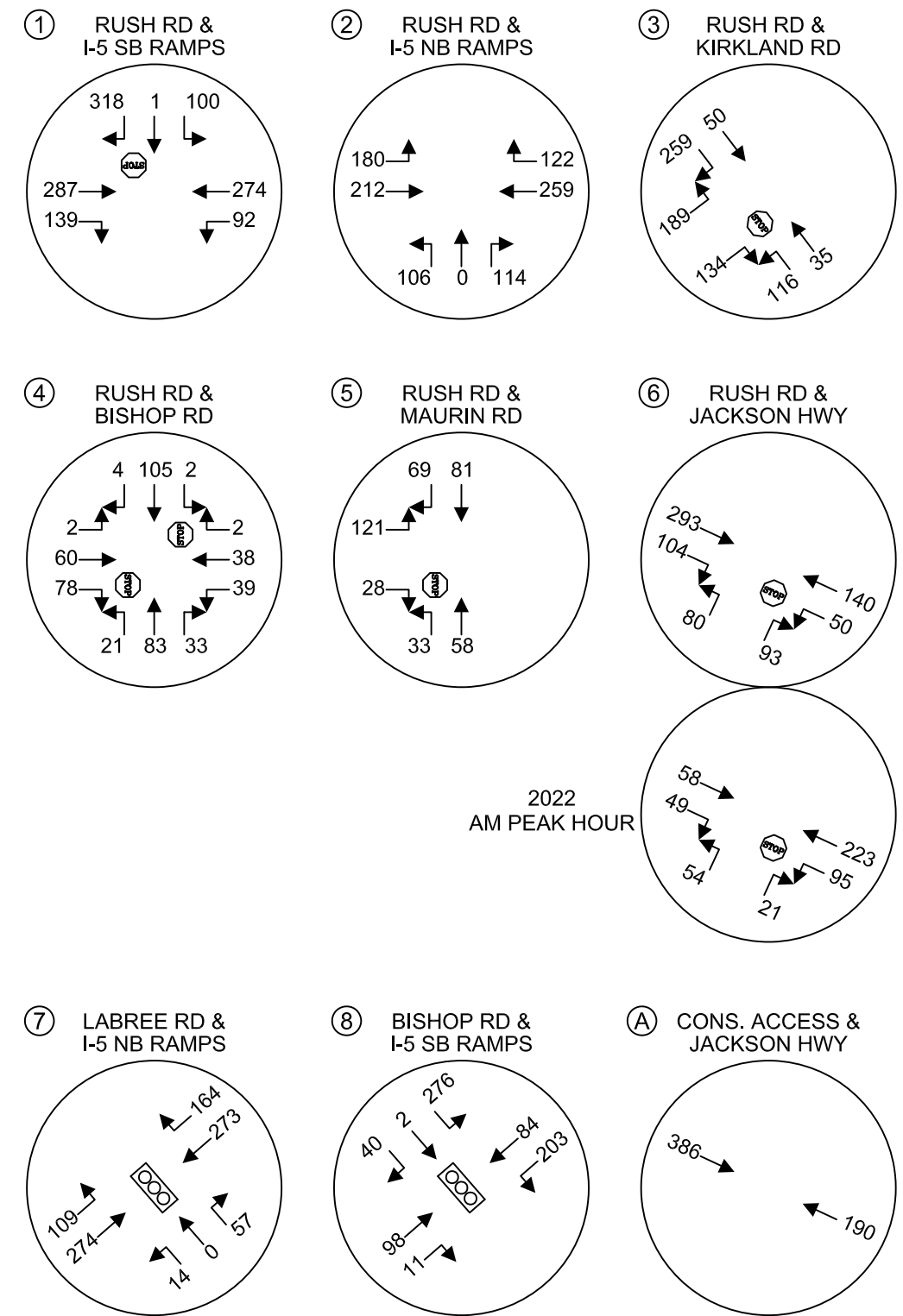
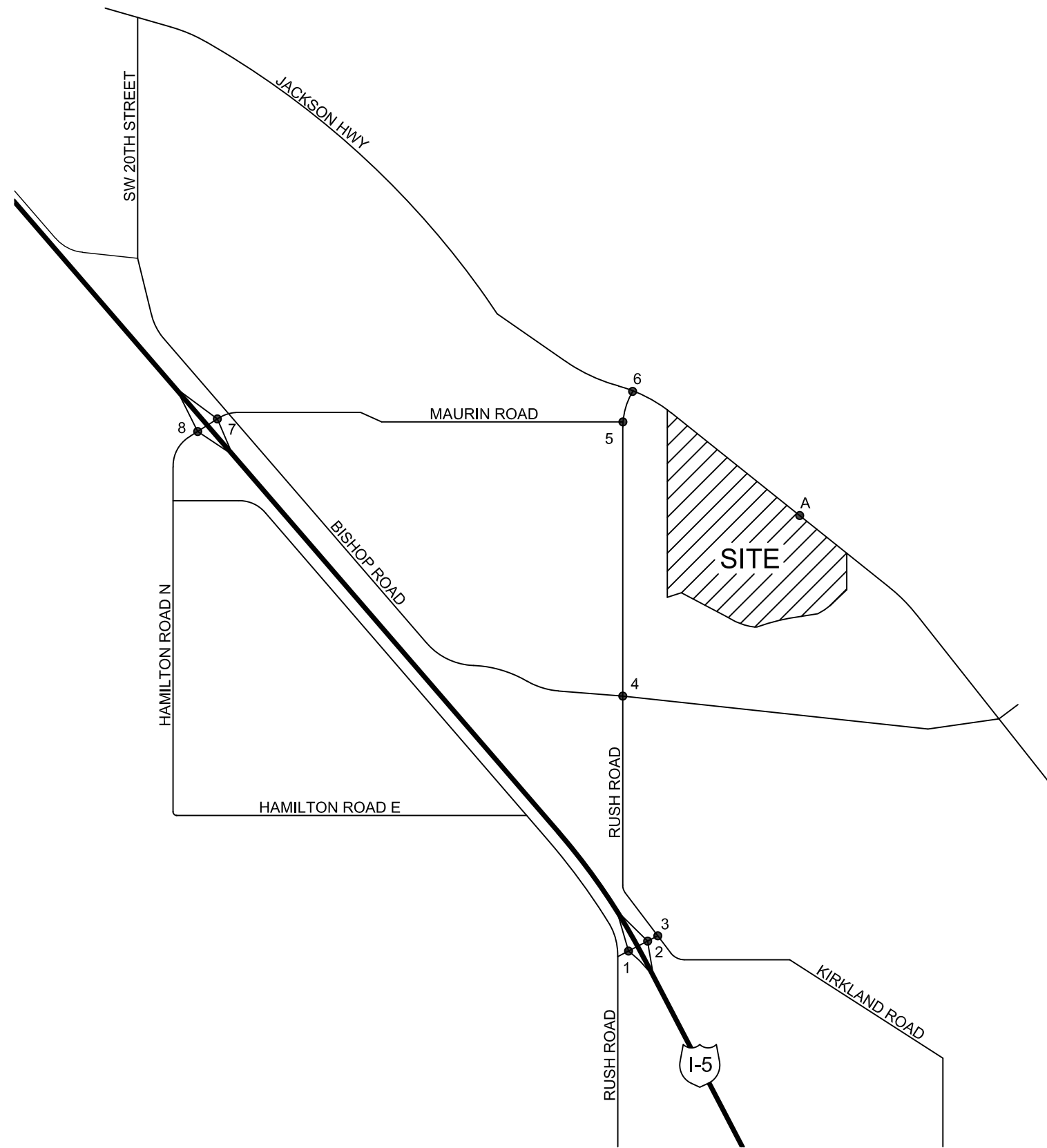
#### 3.3 Existing Peak Hour Volumes and Patterns

Field data for this study was collected in October of 2020 and again in January of 2022 (Rush Road & Jackson Hwy per County request) between 7:00-9:00 AM). Traffic counts were taken at the following intersections, which would receive the bulk of the anticipated vehicular demands:

- Rush Rd & I-5 SB Ramps
- Rush Rd & I-5 NB Ramps
- Rush Rd & Kirkland Rd
- Rush Rd & Bishop Rd
- Rush Rd & Maurin Rd
- Rush Rd & Jackson Hwy
- Labree Rd & I-5 SB Ramps
- Labree Rd & I-5 NB Ramps

Data was obtained during evening peak period between the hours of 4:00 PM – 6:00 PM, which generally translates to highest overall roadway volumes in a given 24-hour period. The one hour reflecting highest overall roadway volumes (peak hour) was then derived from these counts.

Additionally, the WSDOT COVID-19 Transportation System Performance Multimodal Executive Summary showed that traffic volumes in the area along state facilities in Lewis County were on average 4% lower than typical baseline conditions on the date the count was taken. To remain conservative in analysis, existing PM peak hour volumes were increased by 5%. Adjusted baseline 2020 PM peak hour volumes at the study intersections are illustrated in Figure 3 on the following page. Full-count sheets have been included in the appendix.



### 3.4 Public Transit

A review of the Twin Transit regional bus schedule indicates that Route 444 – Downtown Chehalis provides service in the vicinity of the subject site. While the nearest stop in relation to the development is provided at Maurin Road & Rush Road (0.15 miles west), riders may flag down a bus at any safe and visible area along the route. Weekday service is provided from 7:00 AM – 7:00 PM (60-minute headways) while weekend service is provided from 7:00 AM – 3:00 PM (60-minute headways). Refer to the Twin Transit bus schedule for further details. As part of site development, bus pullouts may be constructed along Jackson Hwy. Additional coordination with County and Twin Transit is taking place for final requirements.

### 3.5 Roadway Improvements

A review of the City of Chehalis Six-Year (2021-2026) Transportation Improvement Program indicates no following planned project in the general area. A review of the Lewis County Six-Year (2021-2026) Transportation Improvement Program indicates the following planned projects in the general area.

*Rush Road Improvements (Bishop Road to s/o Holloway Drive; Priority #15):* This project entails a major widening of the roadway to include curb, gutter sidewalk and more. Local funds allocated to the project total \$2,280,000 and construction is to begin in 2023.

*Downie Road Extension (southerly extension; Priority #25):* This project entails extending the roadway south to Maurin Road. Federal discretionary funding totals \$1,200,000 and construction is to begin in 2025.

### 3.6 Site Access & Driveway Design

As shown in the provided site plan, two driveways extending southwest from Jackson Highway are proposed. An alternative access on Rush Road and opposite Maurin Road may be available via an easement. All proposed driveways shall maintain and allow for clear sight lines as prescribed in the County engineering and AASHTO<sup>1</sup> standards. As the site would generate a portion of truck traffic, sight lines along the 40-mph Jackson Highway should measure 680 feet to accommodate heavy vehicles. Based on preliminary measurements of Jackson Highway, sight lines can be achieved. The roadway is relatively flat in grade and no horizontal curvature exists that would obstruct the needed visibility for project traffic to safely enter the roadway.

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<sup>1</sup> A Policy on Geometric Design of Highways and Streets, AASHTO, 7<sup>th</sup> Edition, 2018.



### 3.7 Level of Service

Baseline intersection delays were determined through the use of the *Highway Capacity Manual* 6th Edition. Capacity analysis is used to determine level of service (LOS) which is an established measure of congestion for transportation facilities. The range<sup>2</sup> for intersection level of service is LOS A to LOS F with the former indicating the best operating conditions with low control delays and the latter indicating the worst conditions with heavy control delays. Detailed descriptions of intersection LOS are given in the 2016 Highway Capacity Manual. Level of service calculations were made through the use of the *Synchro 10* analysis program. For side-street, stop-controlled intersections, LOS is determined by the approach with the highest delay. Delays presented represent overall weighted average delays for signalized intersections. Table 1 below presents baseline 2020 PM peak hour LOS delays for the key intersection of study.

**Table 1: Baseline 2020 PM Peak Hour Level of Service**

*Delays given in seconds per vehicle*

| Intersection             | Control    | Movement | LOS | Delay |
|--------------------------|------------|----------|-----|-------|
| Rush Rd & I-5 SB Ramps   | Stop       | SB       | C   | 17.6  |
| Rush Rd & I-5 NB Ramps   | Stop       | NB       | C   | 22.5  |
| Rush Rd & Kirkland Rd    | Stop       | EB       | B   | 14.2  |
| Rush Rd & Bishop Rd      | Stop       | WB       | B   | 12.4  |
| Rush Rd & Maurin Rd      | Stop       | EB       | B   | 11.2  |
| Rush Rd & Jackson Hwy    | Stop       | NB       | B   | 12.3  |
| Labree Rd & I-5 NB Ramps | Signalized | Overall  | B   | 14.5  |
| Labree Rd & I-5 SB Ramps | Signalized | Overall  | B   | 19.8  |

SB: Southbound; NB: Northbound; EB: Eastbound; WB: Westbound

Existing PM peak hour conditions are shown to operate with LOS C or better conditions indicating stable operations during the critical PM peak hour of travel.

<sup>2</sup> *Signalized Intersections - Level of Service*

| Level of Service | Control Delay per Vehicle (sec) |
|------------------|---------------------------------|
| A                | ≤ 10                            |
| B                | > 10 and ≤ 20                   |
| C                | > 20 and ≤ 35                   |
| D                | > 35 and ≤ 55                   |
| E                | > 55 and ≤ 80                   |
| F                | > 80                            |

*Stop Controlled Intersections – Level of Service*

| Level of Service | Control Delay per Vehicle (sec) |
|------------------|---------------------------------|
| A                | ≤ 10                            |
| B                | > 10 and ≤ 15                   |
| C                | > 15 and ≤ 25                   |
| D                | > 25 and ≤ 35                   |
| E                | > 35 and ≤ 50                   |
| F                | > 50                            |

Highway Capacity Manual, 6th Edition

## 4. FUTURE TRAFFIC CONDITIONS

### 4.1 Trip Generation

Trip generation is used to determine the magnitude of project impacts on the surrounding street system. This is usually denoted by the quantity or specific number of new trips that enter and exit a project during a designated time period, such as a specific peak hour (AM or PM) or an entire day. Data presented in this report was taken from the Institute of Transportation Engineer's publication *Trip Generation*, 10th Edition. The designated land use for this project is defined as High-Cube Transload and Short-Term Storage Warehouse (LUC 154). Table 2 below summarizes the estimated project trip generation using square footage as the input variable and ITE average rates to determine trip ends. Included are the average weekday daily traffic (AWDT) and the AM and PM peak hours. Refer to the appendix for trip generation output.

**Table 2: Project Trip Generation**

| Land Use  | Size         | AWDT | AM Peak-Hour Trips |     |           | PM Peak-Hour Trips |     |            |
|-----------|--------------|------|--------------------|-----|-----------|--------------------|-----|------------|
|           |              |      | In                 | Out | Total     | In                 | Out | Total      |
| Warehouse | 1,001,615 sf | 1402 | 62                 | 18  | <b>80</b> | 28                 | 72  | <b>100</b> |

Based on ITE data, the project is anticipated to generate 1402 new daily weekday trips with 80 trips occurring in the AM peak hour (62 inbound / 18 outbound) and 100 in the PM peak hour (28 inbound / 72 outbound). It should be noted that a portion of these trips are anticipated to be in the form of heavy vehicles (25% in the AM peak hour / 10% in the PM peak hour) according to ITE data.

### 4.2 Trip Distribution and Assignment

Trip distribution can be described as the travel routes to/from the subject site relative to the adjacent street system. The specific destinations and origins of the generated traffic primarily influence the key study intersections, which will effectively receive the bulk of project impacts. The trips generated by the project are expected to follow the general trip pattern as shown in Figure 4A for the PM peak hour. This distribution allocates all project generated traffic to a single, consolidated access off Jackson Highway. Additionally, an easement is being discussed that would extend an access roadway through the neighboring property to the west, providing connection from the property to the Rush Road & Maurin Road intersection. PM peak hour trip distribution illustrating this easement Scenario is presented in Figure 4B.

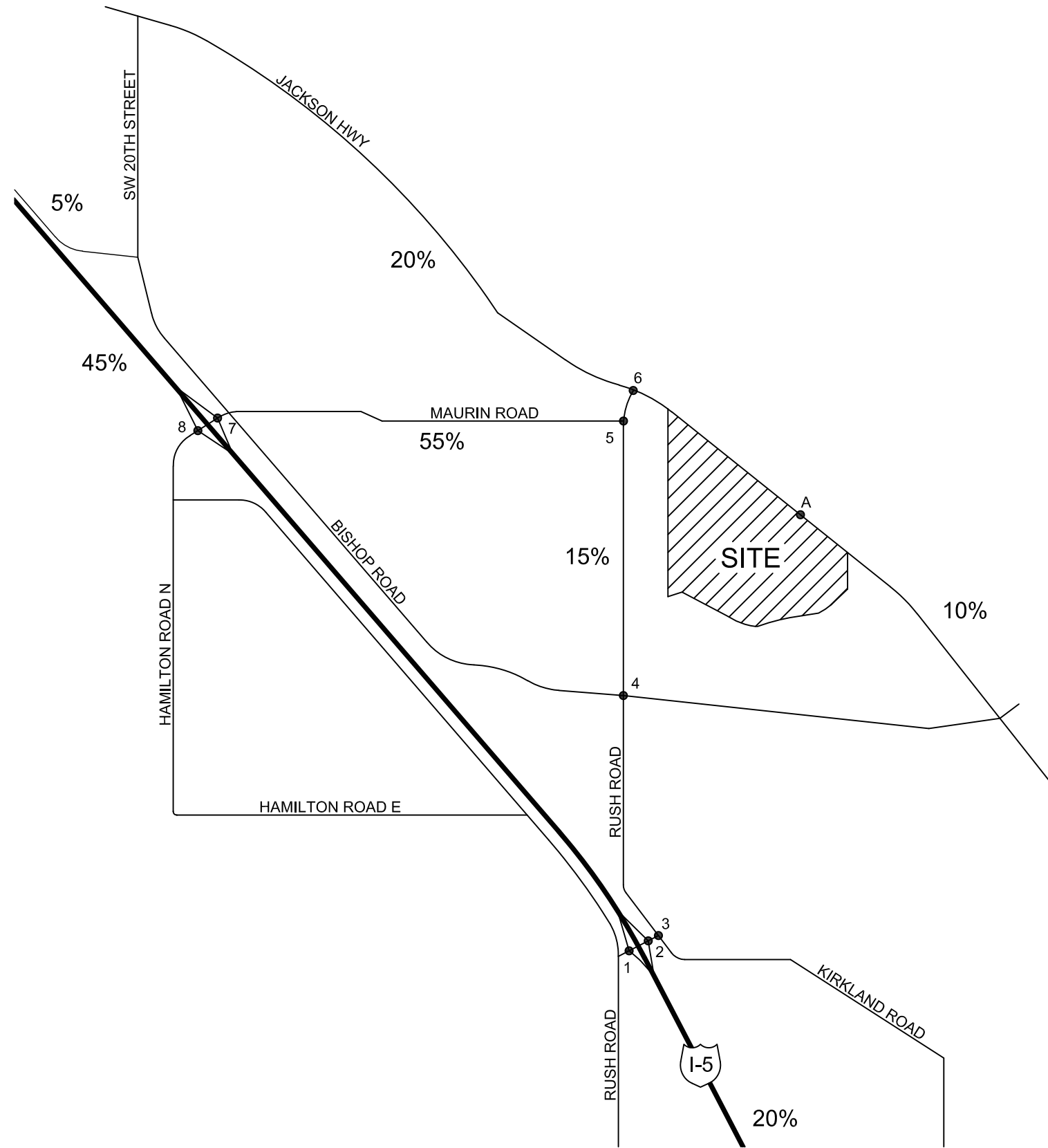
An additional AM peak hour trip distribution exhibit has been prepared and is available in the appendix for reference.

#### 4.3 Future Peak Hour Volumes

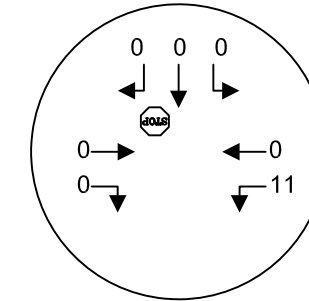
A 5-year horizon of 2025 was used for future traffic delay analysis. The proposed development is located within the Chehalis Urban Growth Area of Lewis County. The City is forecasted to grow at an annual rate of 1.50%<sup>3</sup> according to the Chehalis Comprehensive Plan (2017). Therefore, forecast 2025 background traffic volumes were derived by applying a 1.5 percent compound annual growth rate to the baseline 2020 PM peak hour volumes shown in Figure 3. Forecast 2025 PM peak hour volumes without and with the addition of project-generated traffic (to a consolidated access off Jackson Highway) are shown in Figures 5 and 6, respectively.

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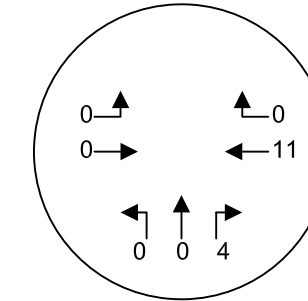
<sup>3</sup> Chehalis Comprehensive Plan 2017: Chapter 3 Land Use, pg. 4



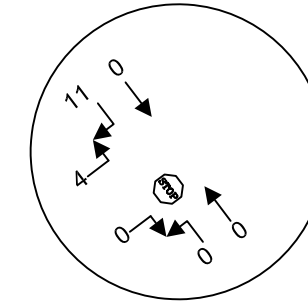
① RUSH RD & I-5 SB RAMPS



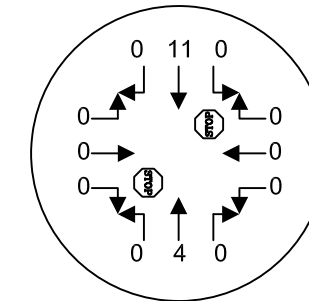
② RUSH RD & I-5 NB RAMPS



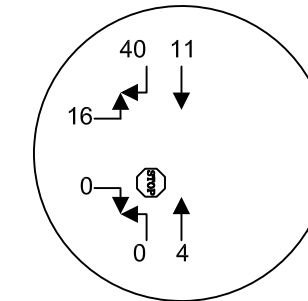
③ RUSH RD & KIRKLAND RD



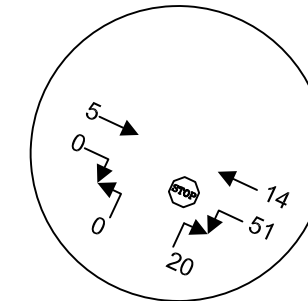
④ RUSH RD & BISHOP RD



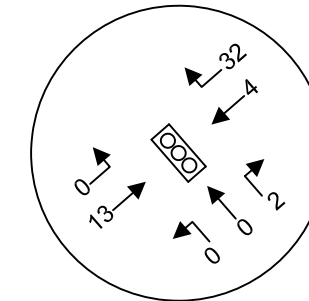
⑤ RUSH RD & MAURIN RD



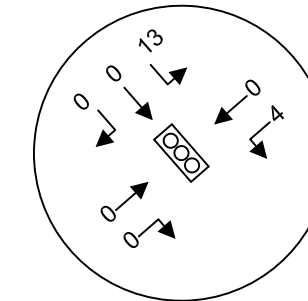
⑥ RUSH RD & JACKSON HWY



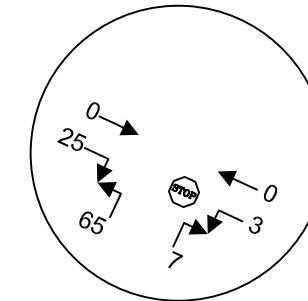
⑦ LABREE RD & I-5 NB RAMPS



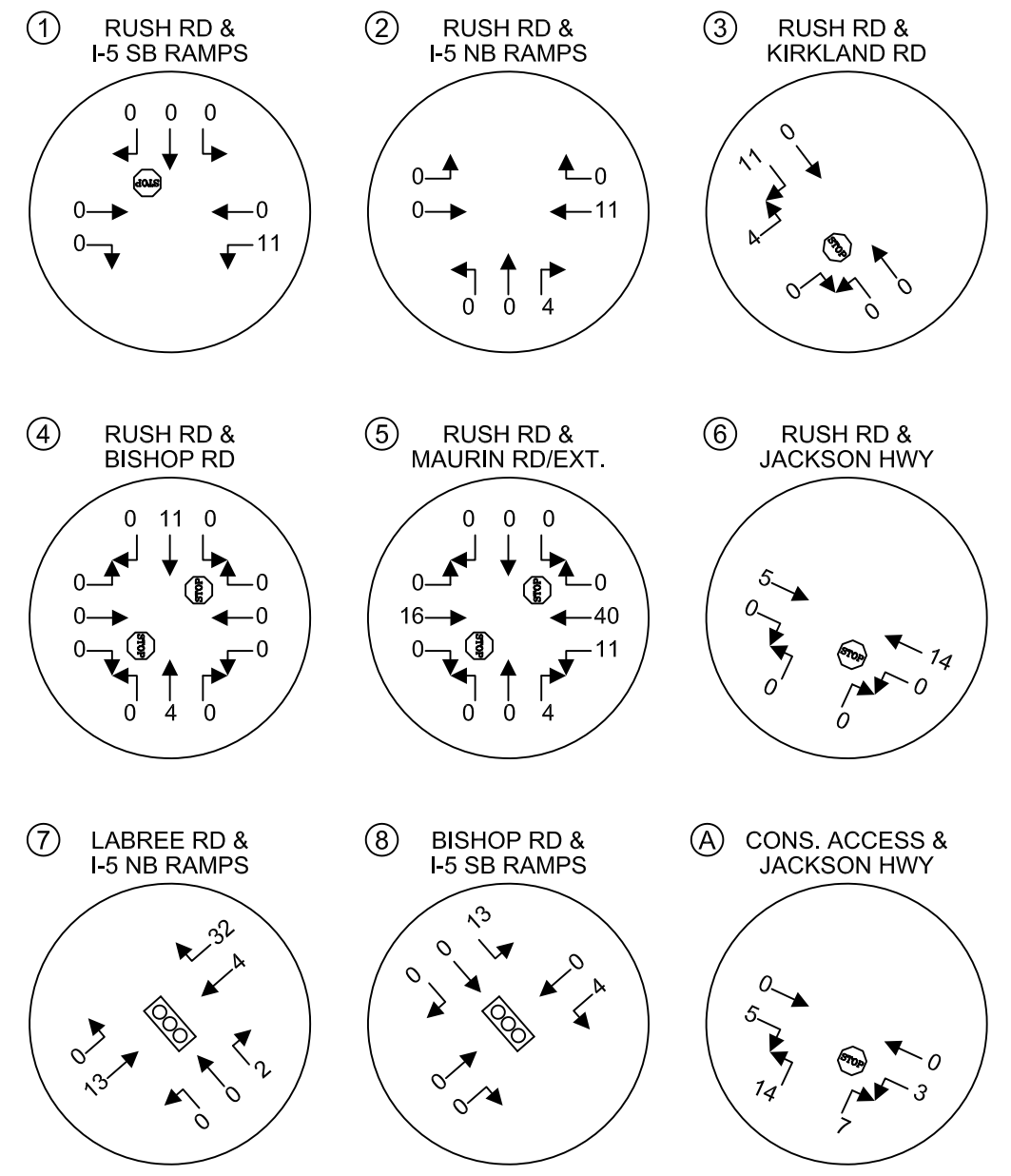
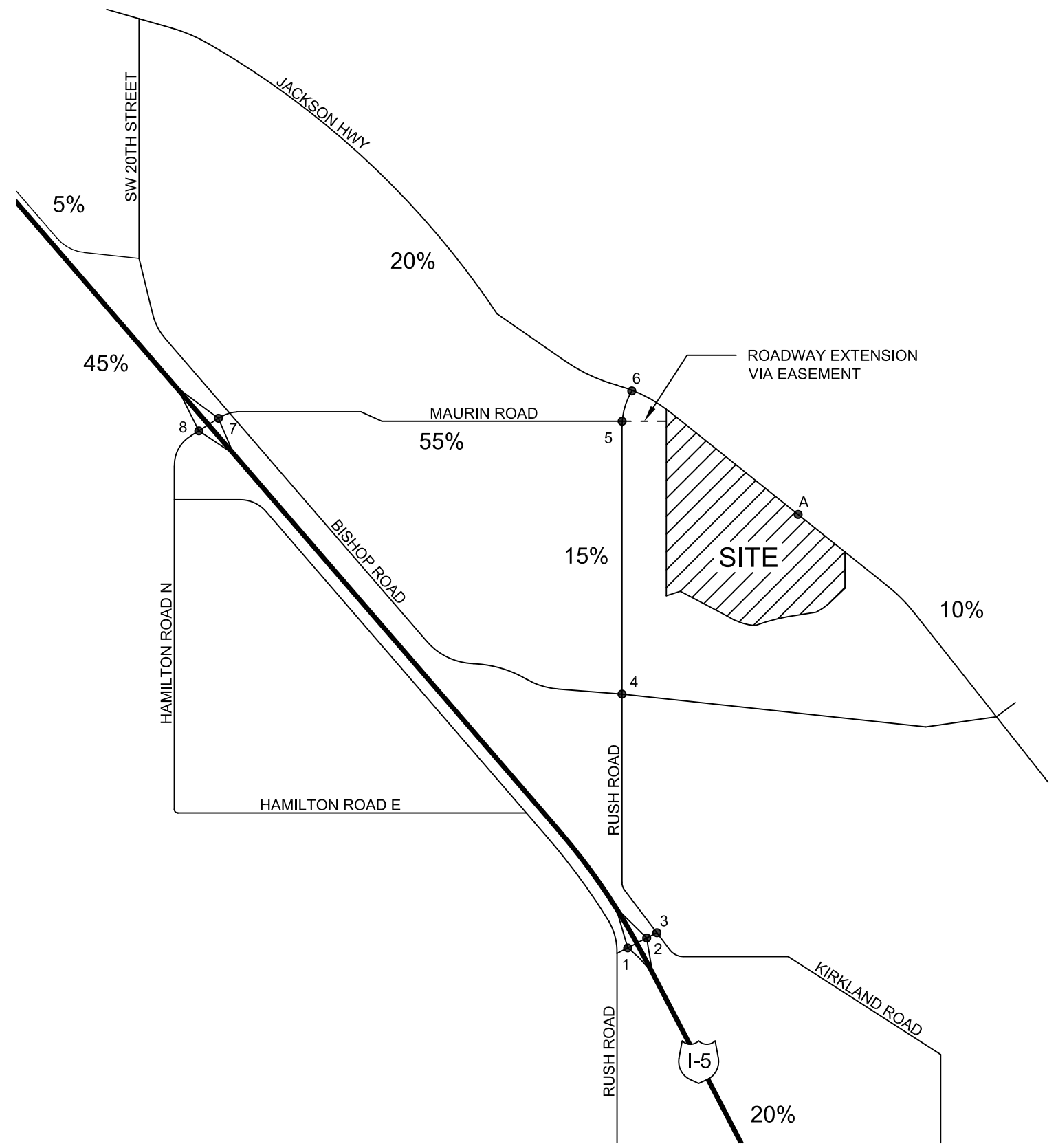
⑧ BISHOP RD & I-5 SB RAMPS



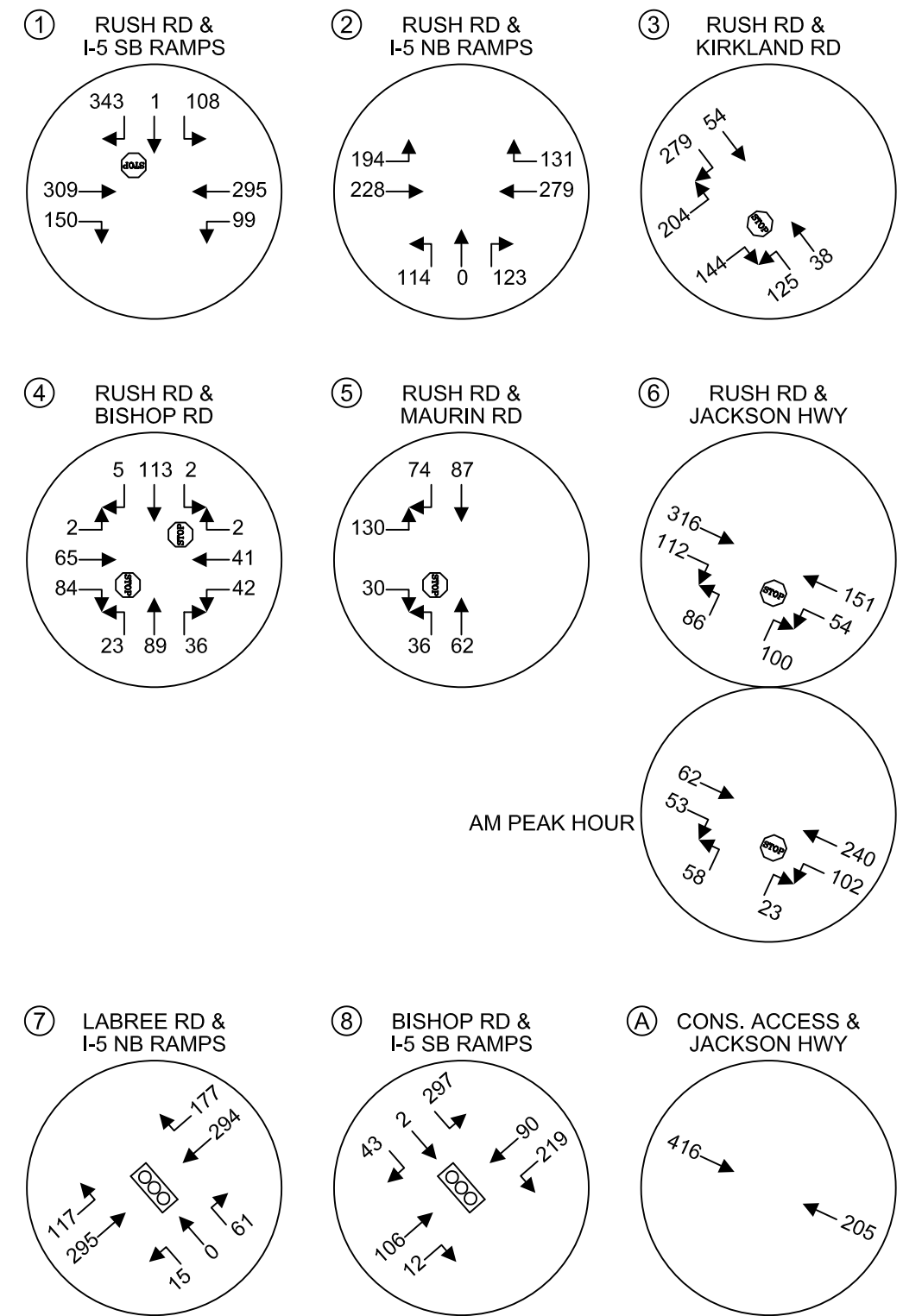
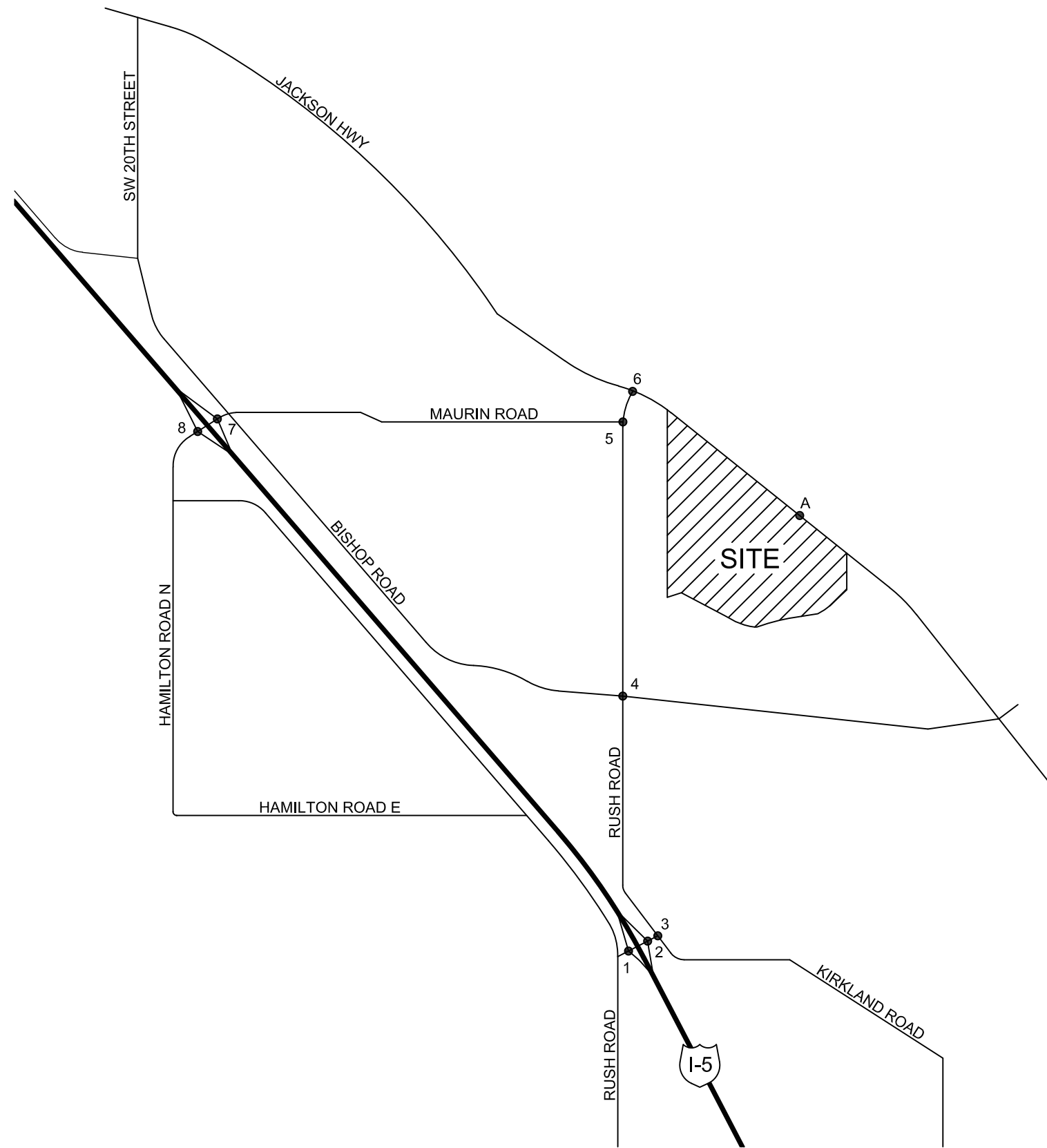
Ⓐ CONS. ACCESS & JACKSON HWY

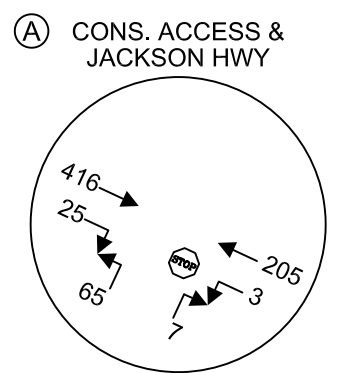
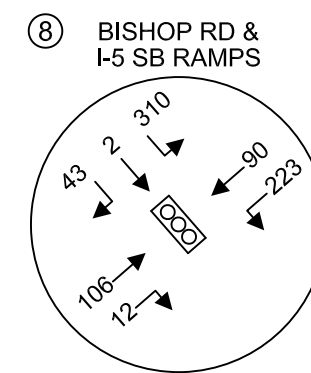
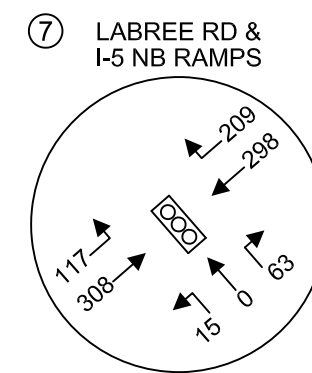
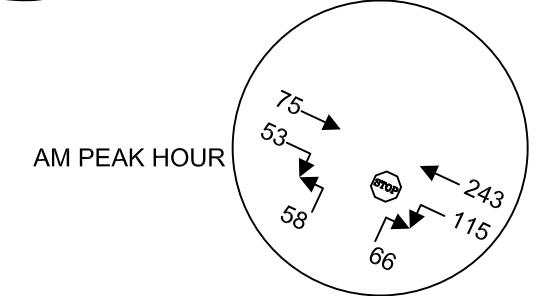
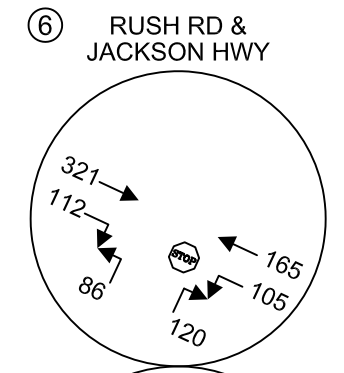
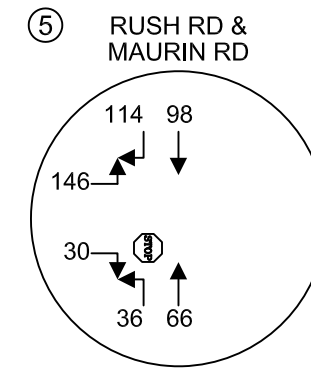
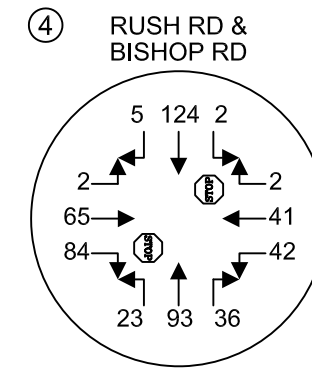
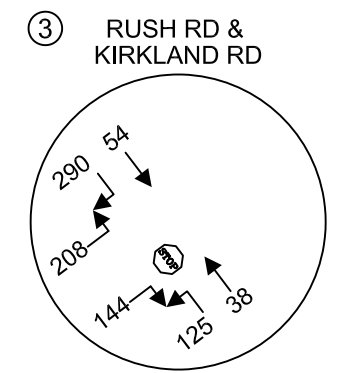
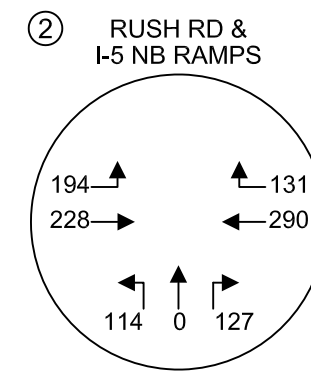
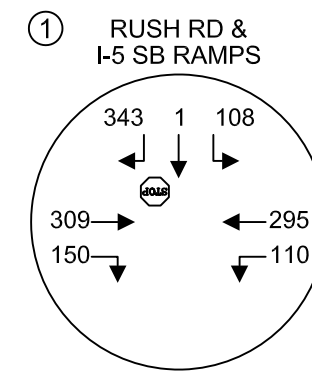
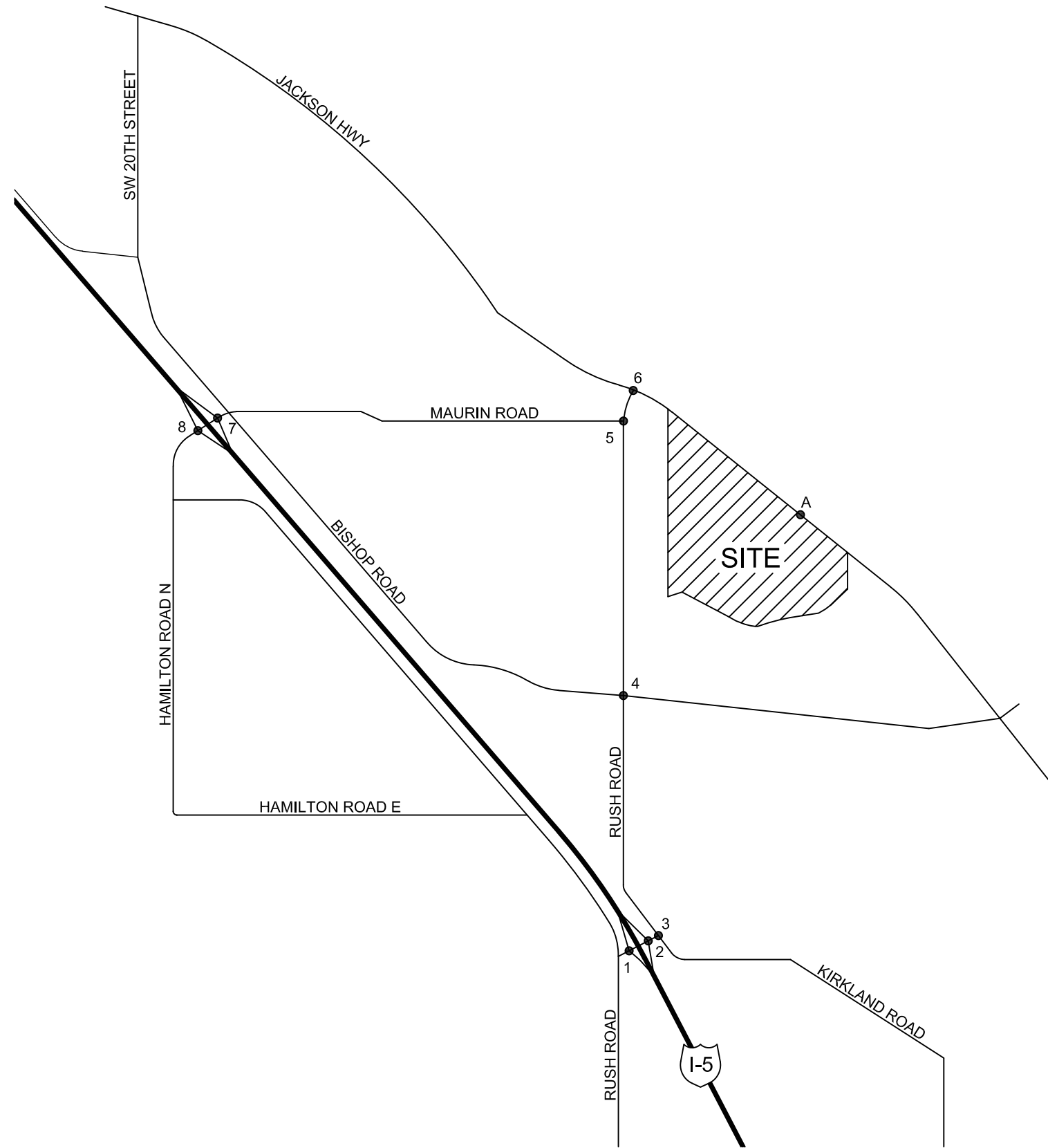


NEW PM PEAK HOUR TRIPS  
 INBOUND: 28 VPH  
 OUTBOUND: 72 VPH



**NEW PM PEAK HOUR TRIPS**  
 INBOUND: 28 VPH  
 OUTBOUND: 72 VPH





#### 4.4 Future Level of Service

Level of service analyses were made of the future PM peak hour volumes without (background) and with project related trips added to the key roadways and intersections. This analysis once again involved the use of the *Synchro 10* analysis program. Delays for the study intersections and consolidated project access under future conditions are shown below in Table 3.

**Table 3: Forecast 2025 PM Peak Hour Level of Service**

*Delays given in seconds per vehicle*

| Intersection               | Control    | Movement | <u>Background</u> |       | <u>With Project</u> |       |
|----------------------------|------------|----------|-------------------|-------|---------------------|-------|
|                            |            |          | LOS               | Delay | LOS                 | Delay |
| Rush Rd & I-5 SB Ramps     | Stop       | SB       | C                 | 20.2  | C                   | 20.9  |
| Rush Rd & I-5 NB Ramps     | Stop       | NB       | D                 | 28.3  | D                   | 28.7  |
| Rush Rd & Kirkland Rd      | Stop       | EB       | C                 | 15.5  | C                   | 15.9  |
| Rush Rd & Bishop Rd        | Stop       | WB       | B                 | 13.0  | B                   | 13.2  |
| Rush Rd & Maurin Rd        | Stop       | EB       | B                 | 11.6  | B                   | 12.3  |
| Rush Rd & Jackson Hwy      | Stop       | NB       | B                 | 12.9  | B                   | 14.4  |
| Labree Rd & I-5 NB Ramps   | Signalized | Overall  | B                 | 14.6  | B                   | 14.6  |
| Labree Rd & I-5 SB Ramps   | Signalized | Overall  | B                 | 20.0  | C                   | 20.1  |
| Jackson Hwy & Cons. Access | Stop       | NB       | -                 | -     | C                   | 15.9  |

Forecast 2025 PM peak hour Level of Service at the proposed study intersections and access are shown to operate at LOS D or better. No operational deficiencies are identified as a result of the proposed development. It should be noted that this analysis assumed no Rush Road & Maurin Road access to remain conservative and present worst case conditions.



## Rush Road & Jackson Highway AM Peak Hour Analysis

As requested in the County’s SEPA comment letter, additional evaluation with respect to Jackson Hwy & Rush Road was needed. See table 4 below for forecast AM peak hour evaluation with project traffic.

**Table 4: Forecast 2025 AM/PM Peak Hour Level of Service with Project**

*Delays given in seconds per vehicle*

| Intersection          | Control | <u>AM Peak Hour</u> |       | <u>PM Peak Hour</u> |       |
|-----------------------|---------|---------------------|-------|---------------------|-------|
|                       |         | LOS                 | Delay | LOS                 | Delay |
| Rush Rd & Jackson Hwy | Stop    | B                   | 12.8  | B                   | 14.4  |

The AM Peak hour, using existing traffic counts with growth rate assumption and background traffic added, is shown to operate with LOS B conditions—similar to the PM peak hour.

### Left-Turn Warrants

Using WSDOT’s Design Manual Exhibit 1310-7a with forecast 2025 AM peak hour volumes, a left-turn lane was found warranted at Rush Road & Jackson Highway. With an estimated 10-20% heavy vehicle composition, a minimum storage length of 125-feet is recommend based on the peak hour volumes and using WSDOT’s methodology. The project proponent is proposing construction for the left-turn lane at this location as well as along the project’s frontage to facilitate safe ingress/egress.

### 4.6 Right Turn Warrant Analysis

Investigations of right turn warrants were conducted to assess whether right turn channelization would be needed at the consolidated project entrance on Jackson Highway. The warrant procedure involves using the WSDOT nomograph, Figure 1310-27, which utilizes right turn volumes and approach traffic. Based on 2025 PM peak hour volumes, it was determined that a right turn pocket or taper is not warranted for consideration at the entrance. The nomograph indicates values just below what would trigger consideration for a right turn pocket. It should be noted that the analysis presented was conservative as all volumes were consolidated to a single access location on Jackson Highway when two would be available.

## 5. SUMMARY

Jackson Highway Warehouse is a proposed 1,000,615 square foot high-cube warehouse located in the Chehalis Urban Growth Area of Lewis County. The subject site is bordered to the northeast by Jackson Highway and is located on a cumulative 69.64-acres within tax parcel #'s: 01780000-1009; -3000; & -1010. Access to the site is to be provided via two driveways extending southwest from Jackson Highway as shown in the site plan on Figure 2. Future development may consist of an easement through the neighboring property to the west providing access from the subject site to the Rush Road & Maurin Road intersection. Based on ITE data the project would be anticipated to generate 80 new AM peak hour trips (62 in / 18 out) and 100 new PM peak hour trips (28 in / 72 out).

Existing level of service (LOS) is summarized in Table 1 and indicates the intersections of study operating with delays of LOS C or better. For forecast analyses, a five-year horizon was evaluated to assess impacts under future conditions. Table 3 summarizes forecast 2025 PM peak hour LOS delays without and with the project. Forecast 2025 conditions are shown to operate satisfactorily with LOS D or better conditions indicating no operational deficiencies. Capacity improvements such as left turn lanes are proposed both across the subject site's frontage as well as a left turn lane on Jackson Highway at Rush Road.

Based on the analysis above, the following mitigation is recommended:

1. Construct a left-turn lane on Jackson Highway at Rush Road. Traffic volumes suggest a minimum of 125-feet of storage capacity. Final design shall be coordinated with the County for approval.
2. Construct two-way left-turn lane along the site's frontage in accordance with County standards.
3. Any transit bus pullouts along Jackson Highway shall be coordinated with Twin Transit and Lewis County for preferred location and design.

No other mitigation is identified at this time.

JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

COUNTS

*APPENDIX*

# Heath & Associates

PO Box 397  
Puyallup, WA 98371

File Name : 4517a  
Site Code : 00004517  
Start Date : 1/6/2022  
Page No : 1

## Groups Printed- Passenger + - Heavy

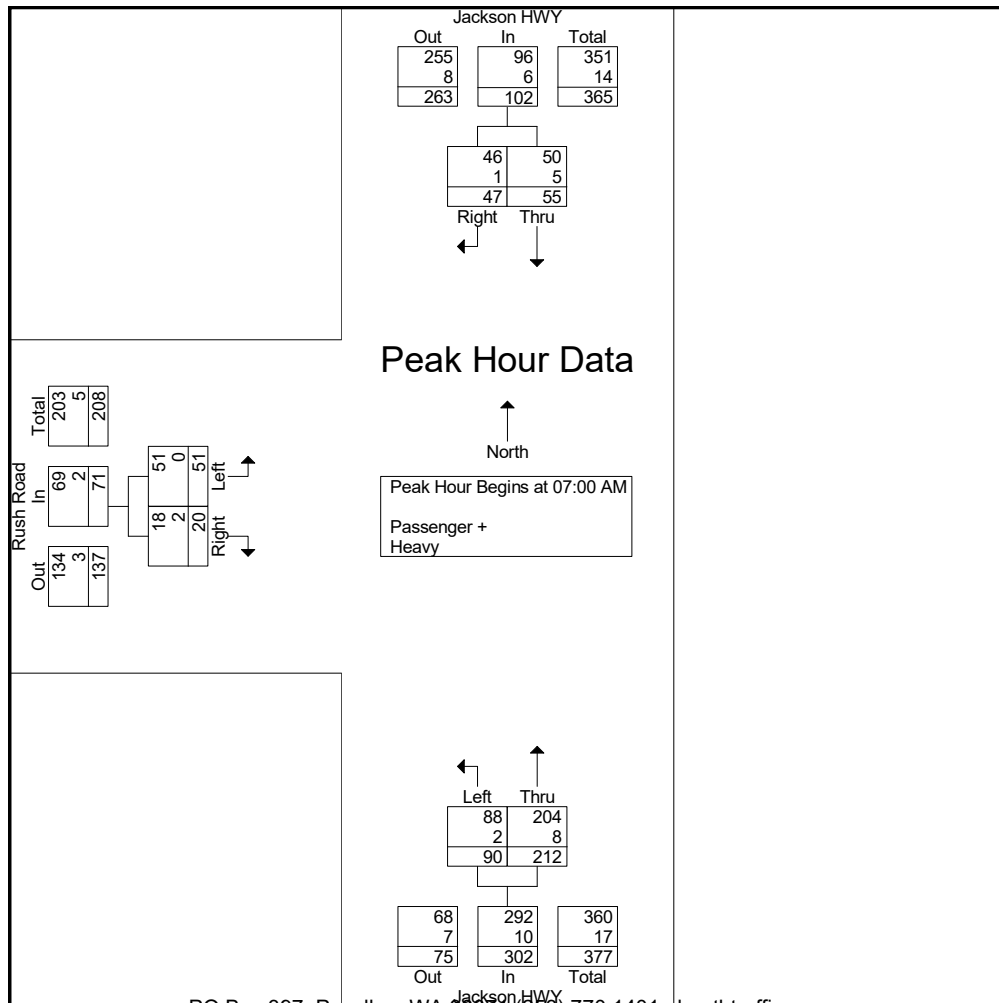
| Start Time    | Jackson HWY<br>From North |      |            | Jackson HWY<br>From South |      |            | Rush Road<br>From West |      |            | Int. Total |
|---------------|---------------------------|------|------------|---------------------------|------|------------|------------------------|------|------------|------------|
|               | Right                     | Thru | App. Total | Thru                      | Left | App. Total | Right                  | Left | App. Total |            |
| 07:00 AM      | 9                         | 11   | 20         | 48                        | 22   | 70         | 0                      | 6    | 6          | 96         |
| 07:15 AM      | 10                        | 13   | 23         | 68                        | 29   | 97         | 6                      | 12   | 18         | 138        |
| 07:30 AM      | 15                        | 16   | 31         | 55                        | 15   | 70         | 7                      | 19   | 26         | 127        |
| 07:45 AM      | 13                        | 15   | 28         | 41                        | 24   | 65         | 7                      | 14   | 21         | 114        |
| Total         | 47                        | 55   | 102        | 212                       | 90   | 302        | 20                     | 51   | 71         | 475        |
| 08:00 AM      | 13                        | 10   | 23         | 29                        | 17   | 46         | 4                      | 8    | 12         | 81         |
| 08:15 AM      | 9                         | 18   | 27         | 35                        | 23   | 58         | 6                      | 7    | 13         | 98         |
| 08:30 AM      | 11                        | 15   | 26         | 54                        | 21   | 75         | 7                      | 11   | 18         | 119        |
| 08:45 AM      | 7                         | 16   | 23         | 38                        | 15   | 53         | 10                     | 16   | 26         | 102        |
| Total         | 40                        | 59   | 99         | 156                       | 76   | 232        | 27                     | 42   | 69         | 400        |
| Grand Total   | 87                        | 114  | 201        | 368                       | 166  | 534        | 47                     | 93   | 140        | 875        |
| Apprch %      | 43.3                      | 56.7 |            | 68.9                      | 31.1 |            | 33.6                   | 66.4 |            |            |
| Total %       | 9.9                       | 13   | 23         | 42.1                      | 19   | 61         | 5.4                    | 10.6 | 16         |            |
| Passenger +   | 86                        | 107  | 193        | 359                       | 160  | 519        | 41                     | 92   | 133        | 845        |
| % Passenger + | 98.9                      | 93.9 | 96         | 97.6                      | 96.4 | 97.2       | 87.2                   | 98.9 | 95         | 96.6       |
| Heavy         | 1                         | 7    | 8          | 9                         | 6    | 15         | 6                      | 1    | 7          | 30         |
| % Heavy       | 1.1                       | 6.1  | 4          | 2.4                       | 3.6  | 2.8        | 12.8                   | 1.1  | 5          | 3.4        |

# Heath & Associates

PO Box 397  
Puyallup, WA 98371

File Name : 4517a  
Site Code : 00004517  
Start Date : 1/6/2022  
Page No : 2

| Start Time   | Jackson HWY<br>From North |           |            | Jackson HWY<br>From South |           |            | Rush Road<br>From West |           |            | Int. Total |
|--|---------------------------|-----------|------------|---------------------------|-----------|------------|------------------------|-----------|------------|------------|
|  | Right                     | Thru      | App. Total | Thru                      | Left      | App. Total | Right                  | Left      | App. Total |            |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                           |           |            |                           |           |            |                        |           |            |            |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                           |           |            |                           |           |            |                        |           |            |            |
| 07:00 AM   | 9                         | 11        | 20         | 48                        | 22        | 70         | 0                      | 6         | 6          | 96         |
| 07:15 AM   | 10                        | 13        | 23         | <b>68</b>                 | <b>29</b> | <b>97</b>  | 6                      | 12        | 18         | <b>138</b> |
| 07:30 AM   | <b>15</b>                 | <b>16</b> | <b>31</b>  | 55                        | 15        | 70         | <b>7</b>               | <b>19</b> | <b>26</b>  | 127        |
| 07:45 AM   | 13                        | 15        | 28         | 41                        | 24        | 65         | 7                      | 14        | 21         | 114        |
| Total Volume   | 47                        | 55        | 102        | 212                       | 90        | 302        | 20                     | 51        | 71         | 475        |
| % App. Total   | 46.1                      | 53.9      |            | 70.2                      | 29.8      |            | 28.2                   | 71.8      |            |            |
| PHF  | .783                      | .859      | .823       | .779                      | .776      | .778       | .714                   | .671      | .683       | .861       |
| Passenger +  | 46                        | 50        | 96         | 204                       | 88        | 292        | 18                     | 51        | 69         | 457        |
| % Passenger +  | 97.9                      | 90.9      | 94.1       | 96.2                      | 97.8      | 96.7       | 90.0                   | 100       | 97.2       | 96.2       |
| Heavy  | 1                         | 5         | 6          | 8                         | 2         | 10         | 2                      | 0         | 2          | 18         |
| % Heavy  | 2.1                       | 9.1       | 5.9        | 3.8                       | 2.2       | 3.3        | 10.0                   | 0         | 2.8        | 3.8        |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517a  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 1

## Groups Printed- Passenger - + Trucks

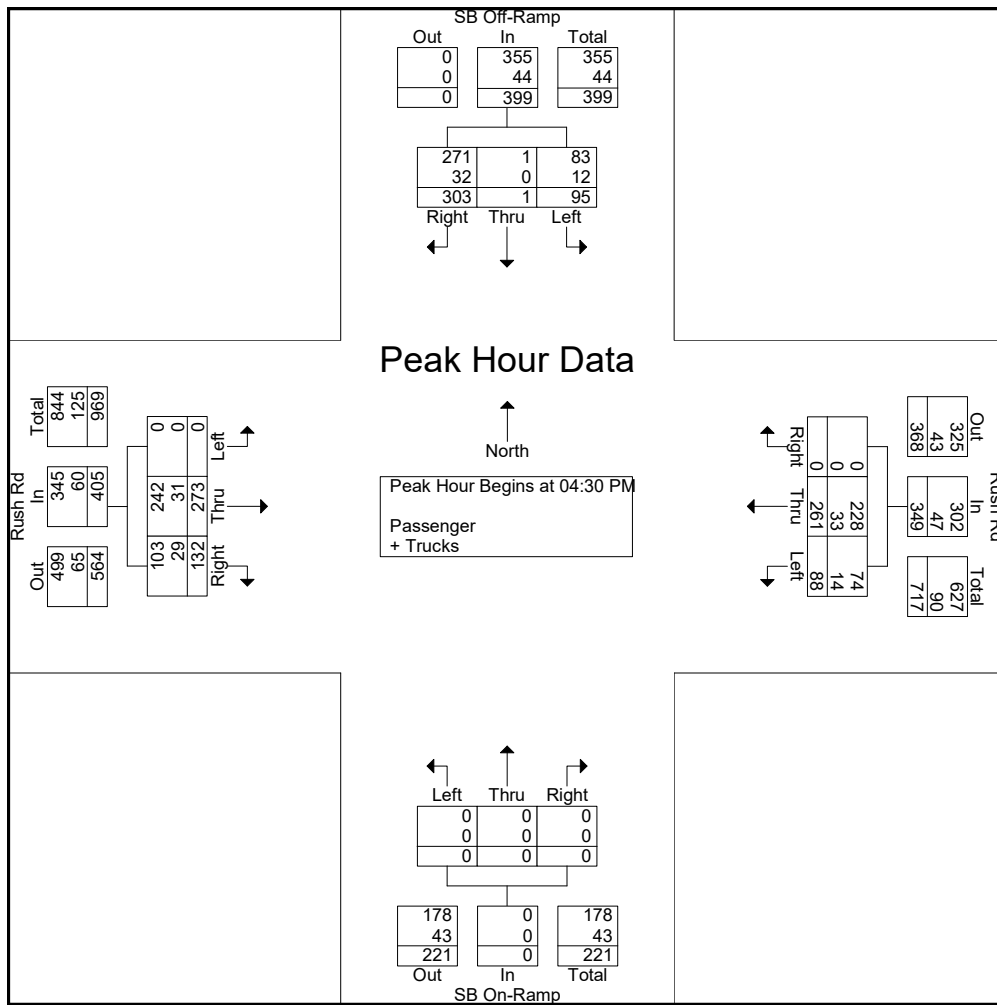
| Start Time  | SB Off-Ramp Southbound |      |      |            | Rush Rd Westbound |      |      |            | SB On-Ramp Northbound |      |      |            | Rush Rd Eastbound |      |      |            | Int. Total |
|-------------|------------------------|------|------|------------|-------------------|------|------|------------|-----------------------|------|------|------------|-------------------|------|------|------------|------------|
|             | Right                  | Thru | Left | App. Total | Right             | Thru | Left | App. Total | Right                 | Thru | Left | App. Total | Right             | Thru | Left | App. Total |            |
| 04:00 PM    | 73                     | 0    | 24   | 97         | 0                 | 49   | 23   | 72         | 0                     | 0    | 0    | 0          | 37                | 69   | 0    | 106        | 275        |
| 04:15 PM    | 72                     | 0    | 15   | 87         | 0                 | 61   | 20   | 81         | 0                     | 0    | 0    | 0          | 30                | 67   | 0    | 97         | 265        |
| 04:30 PM    | 68                     | 0    | 19   | 87         | 0                 | 60   | 24   | 84         | 0                     | 0    | 0    | 0          | 15                | 79   | 0    | 94         | 265        |
| 04:45 PM    | 81                     | 1    | 29   | 111        | 0                 | 77   | 22   | 99         | 0                     | 0    | 0    | 0          | 40                | 64   | 0    | 104        | 314        |
| Total       | 294                    | 1    | 87   | 382        | 0                 | 247  | 89   | 336        | 0                     | 0    | 0    | 0          | 122               | 279  | 0    | 401        | 1119       |
| 05:00 PM    | 71                     | 0    | 18   | 89         | 0                 | 59   | 24   | 83         | 0                     | 0    | 0    | 0          | 43                | 64   | 0    | 107        | 279        |
| 05:15 PM    | 83                     | 0    | 29   | 112        | 0                 | 65   | 18   | 83         | 0                     | 0    | 0    | 0          | 34                | 66   | 0    | 100        | 295        |
| 05:30 PM    | 82                     | 0    | 19   | 101        | 0                 | 46   | 13   | 59         | 0                     | 0    | 0    | 0          | 40                | 59   | 0    | 99         | 259        |
| 05:45 PM    | 47                     | 0    | 20   | 67         | 0                 | 45   | 25   | 70         | 0                     | 0    | 0    | 0          | 26                | 61   | 0    | 87         | 224        |
| Total       | 283                    | 0    | 86   | 369        | 0                 | 215  | 80   | 295        | 0                     | 0    | 0    | 0          | 143               | 250  | 0    | 393        | 1057       |
| Grand Total | 577                    | 1    | 173  | 751        | 0                 | 462  | 169  | 631        | 0                     | 0    | 0    | 0          | 265               | 529  | 0    | 794        | 2176       |
| Apprch %    | 76.8                   | 0.1  | 23   |            | 0                 | 73.2 | 26.8 |            | 0                     | 0    | 0    |            | 33.4              | 66.6 | 0    |            |            |
| Total %     | 26.5                   | 0    | 8    | 34.5       | 0                 | 21.2 | 7.8  | 29         | 0                     | 0    | 0    | 0          | 12.2              | 24.3 | 0    | 36.5       |            |
| Passenger   | 522                    | 1    | 154  | 677        | 0                 | 394  | 149  | 543        | 0                     | 0    | 0    | 0          | 201               | 465  | 0    | 666        | 1886       |
| % Passenger | 90.5                   | 100  | 89   | 90.1       | 0                 | 85.3 | 88.2 | 86.1       | 0                     | 0    | 0    | 0          | 75.8              | 87.9 | 0    | 83.9       | 86.7       |
| + Trucks    | 55                     | 0    | 19   | 74         | 0                 | 68   | 20   | 88         | 0                     | 0    | 0    | 0          | 64                | 64   | 0    | 128        | 290        |
| % + Trucks  | 9.5                    | 0    | 11   | 9.9        | 0                 | 14.7 | 11.8 | 13.9       | 0                     | 0    | 0    | 0          | 24.2              | 12.1 | 0    | 16.1       | 13.3       |

# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517a  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 2

| Start Time   | SB Off-Ramp Southbound |      |      |            | Rush Rd Westbound |      |      |            | SB On-Ramp Northbound |      |      |            | Rush Rd Eastbound |      |      |            | Int. Total |
|--|------------------------|------|------|------------|-------------------|------|------|------------|-----------------------|------|------|------------|-------------------|------|------|------------|------------|
|  | Right                  | Thru | Left | App. Total | Right             | Thru | Left | App. Total | Right                 | Thru | Left | App. Total | Right             | Thru | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                        |      |      |            |                   |      |      |            |                       |      |      |            |                   |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                        |      |      |            |                   |      |      |            |                       |      |      |            |                   |      |      |            |            |
| 04:30 PM   | 68                     | 0    | 19   | 87         | 0                 | 60   | 24   | 84         | 0                     | 0    | 0    | 0          | 15                | 79   | 0    | 94         | 265        |
| 04:45 PM   | 81                     | 1    | 29   | 111        | 0                 | 77   | 22   | 99         | 0                     | 0    | 0    | 0          | 40                | 64   | 0    | 104        | 314        |
| 05:00 PM   | 71                     | 0    | 18   | 89         | 0                 | 59   | 24   | 83         | 0                     | 0    | 0    | 0          | 43                | 64   | 0    | 107        | 279        |
| 05:15 PM   | 83                     | 0    | 29   | 112        | 0                 | 65   | 18   | 83         | 0                     | 0    | 0    | 0          | 34                | 66   | 0    | 100        | 295        |
| Total Volume   | 303                    | 1    | 95   | 399        | 0                 | 261  | 88   | 349        | 0                     | 0    | 0    | 0          | 132               | 273  | 0    | 405        | 1153       |
| % App. Total   | 75.9                   | 0.3  | 23.8 |            | 0                 | 74.8 | 25.2 |            | 0                     | 0    | 0    |            | 32.6              | 67.4 | 0    |            |            |
| PHF  | .913                   | .250 | .819 | .891       | .000              | .847 | .917 | .881       | .000                  | .000 | .000 | .000       | .767              | .864 | .000 | .946       | .918       |
| Passenger  | 271                    | 1    | 83   | 355        | 0                 | 228  | 74   | 302        | 0                     | 0    | 0    | 0          | 103               | 242  | 0    | 345        | 1002       |
| % Passenger  | 89.4                   | 100  | 87.4 | 89.0       | 0                 | 87.4 | 84.1 | 86.5       | 0                     | 0    | 0    | 0          | 78.0              | 88.6 | 0    | 85.2       | 86.9       |
| + Trucks   | 32                     | 0    | 12   | 44         | 0                 | 33   | 14   | 47         | 0                     | 0    | 0    | 0          | 29                | 31   | 0    | 60         | 151        |
| % + Trucks   | 10.6                   | 0    | 12.6 | 11.0       | 0                 | 12.6 | 15.9 | 13.5       | 0                     | 0    | 0    | 0          | 22.0              | 11.4 | 0    | 14.8       | 13.1       |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517b  
Site Code : 00004517  
Start Date : 10/15/2020  
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Groups Printed- Passenger - + Trucks

| Start Time  | NB On-Ramp Southbound |      |      |            | Rush Rd Westbound |      |      |            | NB Off-Ramp Northbound |      |      |            | Rush Rd Eastbound |      |      |            | Int. Total |
|-------------|-----------------------|------|------|------------|-------------------|------|------|------------|------------------------|------|------|------------|-------------------|------|------|------------|------------|
|             | Right                 | Thru | Left | App. Total | Right             | Thru | Left | App. Total | Right                  | Thru | Left | App. Total | Right             | Thru | Left | App. Total |            |
| 04:00 PM    | 0                     | 0    | 0    | 0          | 22                | 53   | 0    | 75         | 19                     | 1    | 21   | 41         | 0                 | 40   | 55   | 95         | 211        |
| 04:15 PM    | 0                     | 0    | 0    | 0          | 21                | 59   | 0    | 80         | 19                     | 0    | 20   | 39         | 0                 | 45   | 41   | 86         | 205        |
| 04:30 PM    | 0                     | 0    | 0    | 0          | 28                | 67   | 0    | 95         | 27                     | 0    | 22   | 49         | 0                 | 45   | 52   | 97         | 241        |
| 04:45 PM    | 0                     | 0    | 0    | 0          | 30                | 58   | 0    | 88         | 23                     | 0    | 35   | 58         | 0                 | 57   | 37   | 94         | 240        |
| Total       | 0                     | 0    | 0    | 0          | 101               | 237  | 0    | 338        | 88                     | 1    | 98   | 187        | 0                 | 187  | 185  | 372        | 897        |
| 05:00 PM    | 0                     | 0    | 0    | 0          | 31                | 71   | 0    | 102        | 28                     | 0    | 17   | 45         | 0                 | 38   | 42   | 80         | 227        |
| 05:15 PM    | 0                     | 0    | 0    | 0          | 27                | 51   | 0    | 78         | 31                     | 0    | 27   | 58         | 0                 | 62   | 40   | 102        | 238        |
| 05:30 PM    | 0                     | 0    | 0    | 0          | 21                | 30   | 0    | 51         | 18                     | 0    | 25   | 43         | 0                 | 33   | 40   | 73         | 167        |
| 05:45 PM    | 0                     | 0    | 0    | 0          | 17                | 57   | 0    | 74         | 25                     | 1    | 18   | 44         | 0                 | 37   | 44   | 81         | 199        |
| Total       | 0                     | 0    | 0    | 0          | 96                | 209  | 0    | 305        | 102                    | 1    | 87   | 190        | 0                 | 170  | 166  | 336        | 831        |
| Grand Total | 0                     | 0    | 0    | 0          | 197               | 446  | 0    | 643        | 190                    | 2    | 185  | 377        | 0                 | 357  | 351  | 708        | 1728       |
| Apprch %    | 0                     | 0    | 0    | 0          | 30.6              | 69.4 | 0    |            | 50.4                   | 0.5  | 49.1 |            | 0                 | 50.4 | 49.6 |            |            |
| Total %     | 0                     | 0    | 0    | 0          | 11.4              | 25.8 | 0    | 37.2       | 11                     | 0.1  | 10.7 | 21.8       | 0                 | 20.7 | 20.3 | 41         |            |
| Passenger   | 0                     | 0    | 0    | 0          | 180               | 419  | 0    | 599        | 170                    | 1    | 124  | 295        | 0                 | 334  | 297  | 631        | 1525       |
| % Passenger | 0                     | 0    | 0    | 0          | 91.4              | 93.9 | 0    | 93.2       | 89.5                   | 50   | 67   | 78.2       | 0                 | 93.6 | 84.6 | 89.1       | 88.3       |
| + Trucks    | 0                     | 0    | 0    | 0          | 17                | 27   | 0    | 44         | 20                     | 1    | 61   | 82         | 0                 | 23   | 54   | 77         | 203        |
| % + Trucks  | 0                     | 0    | 0    | 0          | 8.6               | 6.1  | 0    | 6.8        | 10.5                   | 50   | 33   | 21.8       | 0                 | 6.4  | 15.4 | 10.9       | 11.7       |

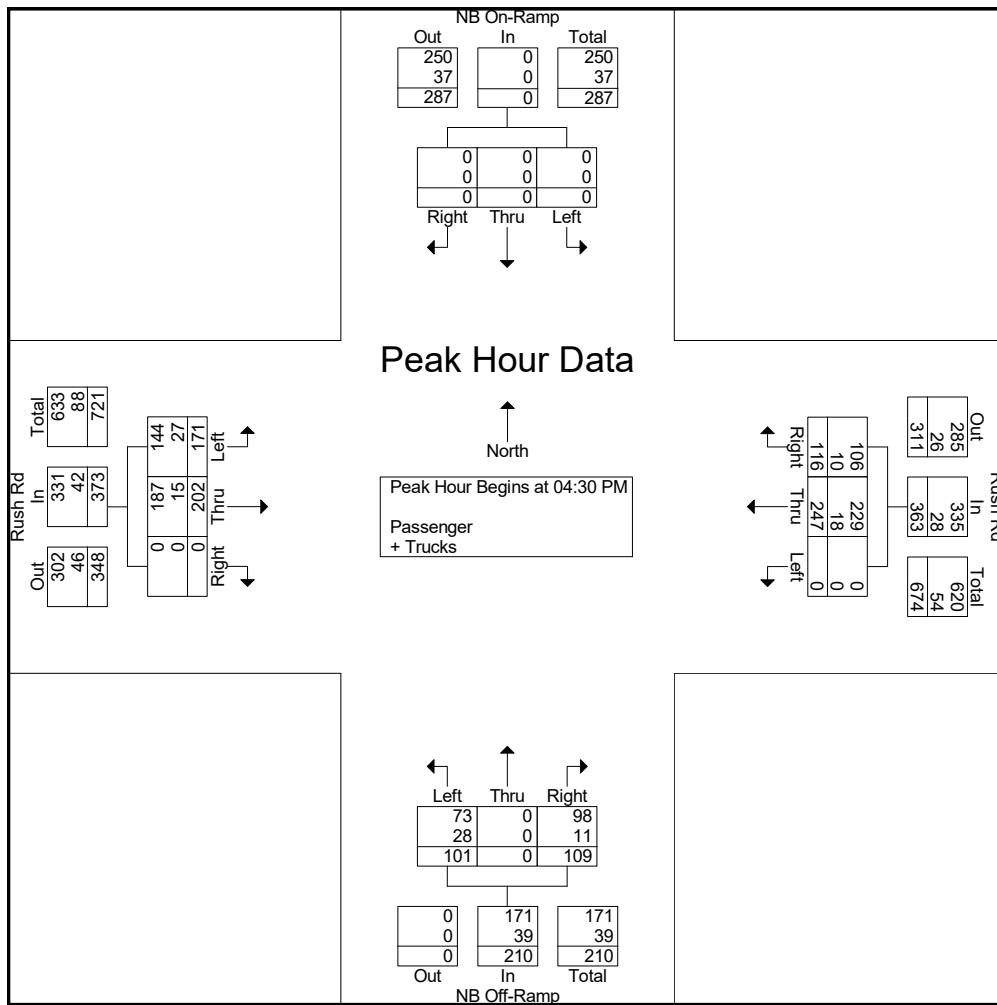


# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517b  
Site Code : 00004517  
Start Date : 10/15/2020  
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| Start Time   | NB On-Ramp Southbound |      |      |            | Rush Rd Westbound |      |      |            | NB Off-Ramp Northbound |      |      |            | Rush Rd Eastbound |      |      |            | Int. Total |
|--|-----------------------|------|------|------------|-------------------|------|------|------------|------------------------|------|------|------------|-------------------|------|------|------------|------------|
|  | Right                 | Thru | Left | App. Total | Right             | Thru | Left | App. Total | Right                  | Thru | Left | App. Total | Right             | Thru | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                       |      |      |            |                   |      |      |            |                        |      |      |            |                   |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                       |      |      |            |                   |      |      |            |                        |      |      |            |                   |      |      |            |            |
| 04:30 PM   | 0                     | 0    | 0    | 0          | 28                | 67   | 0    | 95         | 27                     | 0    | 22   | 49         | 0                 | 45   | 52   | 97         | 241        |
| 04:45 PM   | 0                     | 0    | 0    | 0          | 30                | 58   | 0    | 88         | 23                     | 0    | 35   | 58         | 0                 | 57   | 37   | 94         | 240        |
| 05:00 PM   | 0                     | 0    | 0    | 0          | 31                | 71   | 0    | 102        | 28                     | 0    | 17   | 45         | 0                 | 38   | 42   | 80         | 227        |
| 05:15 PM   | 0                     | 0    | 0    | 0          | 27                | 51   | 0    | 78         | 31                     | 0    | 27   | 58         | 0                 | 62   | 40   | 102        | 238        |
| Total Volume   | 0                     | 0    | 0    | 0          | 116               | 247  | 0    | 363        | 109                    | 0    | 101  | 210        | 0                 | 202  | 171  | 373        | 946        |
| % App. Total   | 0                     | 0    | 0    | 0          | 32                | 68   | 0    | 92.3       | 51.9                   | 0    | 48.1 | 81.4       | 0                 | 54.2 | 45.8 | 88.7       | 88.5       |
| PHF  | .000                  | .000 | .000 | .000       | .935              | .870 | .000 | .890       | .879                   | .000 | .721 | .905       | .000              | .815 | .822 | .914       | .981       |
| Passenger  | 0                     | 0    | 0    | 0          | 106               | 229  | 0    | 335        | 98                     | 0    | 73   | 171        | 0                 | 187  | 144  | 331        | 837        |
| % Passenger + Trucks                                       | 0                     | 0    | 0    | 0          | 91.4              | 92.7 | 0    | 92.3       | 89.9                   | 0    | 72.3 | 81.4       | 0                 | 92.6 | 84.2 | 88.7       | 88.5       |
| + Trucks   | 0                     | 0    | 0    | 0          | 10                | 18   | 0    | 28         | 11                     | 0    | 28   | 39         | 0                 | 15   | 27   | 42         | 109        |
| % + Trucks   | 0                     | 0    | 0    | 0          | 8.6               | 7.3  | 0    | 7.7        | 10.1                   | 0    | 27.7 | 18.6       | 0                 | 7.4  | 15.8 | 11.3       | 11.5       |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517c  
Site Code : 00004517  
Start Date : 10/15/2020  
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## Groups Printed- Passenger - + Trucks

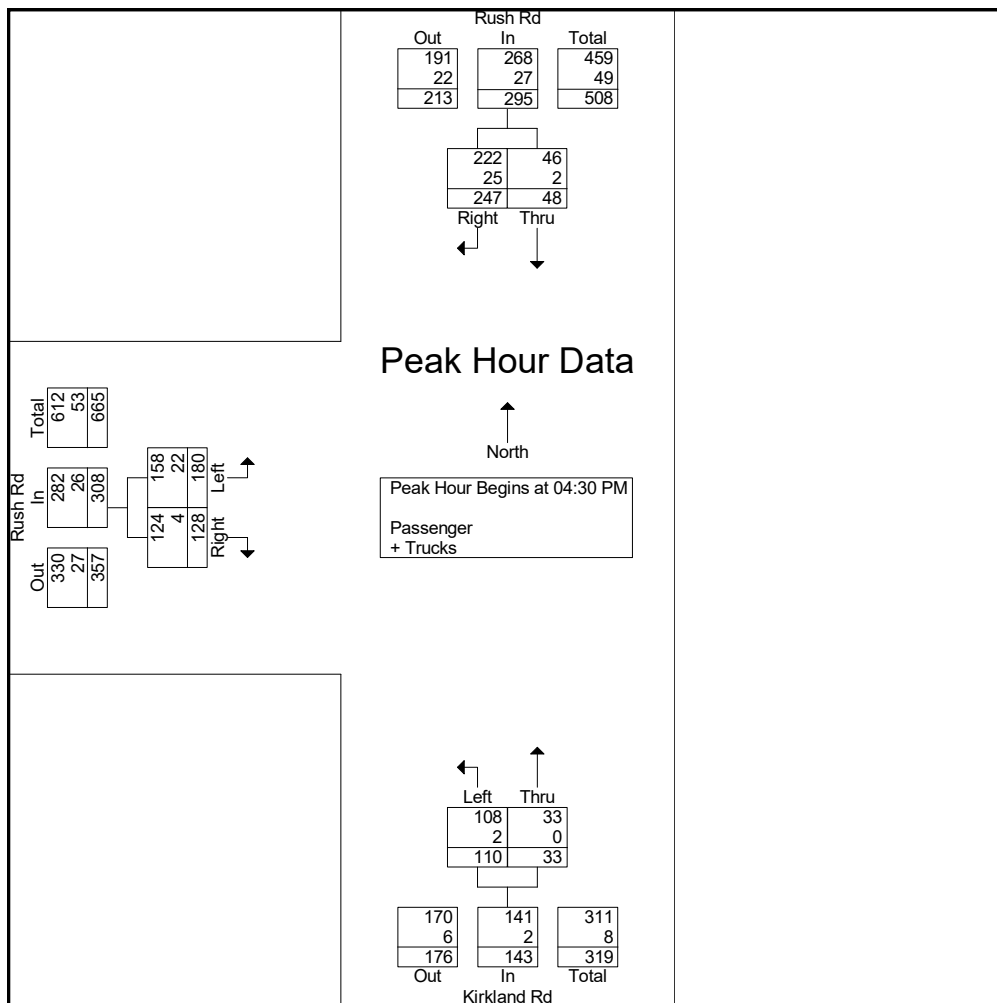
| Start Time  | Rush Rd Southbound |      |            | Kirkland Rd Northbound |      |            | Rush Rd Eastbound |      |            | Int. Total |
|-------------|--------------------|------|------------|------------------------|------|------------|-------------------|------|------------|------------|
|             | Right              | Thru | App. Total | Thru                   | Left | App. Total | Right             | Left | App. Total |            |
| 04:00 PM    | 50                 | 12   | 62         | 12                     | 25   | 37         | 27                | 33   | 60         | 159        |
| 04:15 PM    | 55                 | 7    | 62         | 9                      | 25   | 34         | 20                | 46   | 66         | 162        |
| 04:30 PM    | 73                 | 15   | 88         | 9                      | 20   | 29         | 30                | 41   | 71         | 188        |
| 04:45 PM    | 55                 | 15   | 70         | 12                     | 31   | 43         | 35                | 45   | 80         | 193        |
| Total       | 233                | 49   | 282        | 42                     | 101  | 143        | 112               | 165  | 277        | 702        |
| 05:00 PM    | 75                 | 7    | 82         | 9                      | 27   | 36         | 26                | 38   | 64         | 182        |
| 05:15 PM    | 44                 | 11   | 55         | 3                      | 32   | 35         | 37                | 56   | 93         | 183        |
| 05:30 PM    | 27                 | 12   | 39         | 9                      | 23   | 32         | 29                | 23   | 52         | 123        |
| 05:45 PM    | 47                 | 11   | 58         | 11                     | 28   | 39         | 32                | 31   | 63         | 160        |
| Total       | 193                | 41   | 234        | 32                     | 110  | 142        | 124               | 148  | 272        | 648        |
| Grand Total | 426                | 90   | 516        | 74                     | 211  | 285        | 236               | 313  | 549        | 1350       |
| Apprch %    | 82.6               | 17.4 |            | 26                     | 74   |            | 43                | 57   |            |            |
| Total %     | 31.6               | 6.7  | 38.2       | 5.5                    | 15.6 | 21.1       | 17.5              | 23.2 | 40.7       |            |
| Passenger   | 393                | 87   | 480        | 72                     | 202  | 274        | 228               | 278  | 506        | 1260       |
| % Passenger | 92.3               | 96.7 | 93         | 97.3                   | 95.7 | 96.1       | 96.6              | 88.8 | 92.2       | 93.3       |
| + Trucks    | 33                 | 3    | 36         | 2                      | 9    | 11         | 8                 | 35   | 43         | 90         |
| % + Trucks  | 7.7                | 3.3  | 7          | 2.7                    | 4.3  | 3.9        | 3.4               | 11.2 | 7.8        | 6.7        |

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File Name : 4517c  
Site Code : 00004517  
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| Start Time   | Rush Rd Southbound |      |            | Kirkland Rd Northbound |      |            | Rush Rd Eastbound |      |            | Int. Total |
|--|--------------------|------|------------|------------------------|------|------------|-------------------|------|------------|------------|
|  | Right              | Thru | App. Total | Thru                   | Left | App. Total | Right             | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                    |      |            |                        |      |            |                   |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                    |      |            |                        |      |            |                   |      |            |            |
| 04:30 PM   | 73                 | 15   | 88         | 9                      | 20   | 29         | 30                | 41   | 71         | 188        |
| 04:45 PM   | 55                 | 15   | 70         | 12                     | 31   | 43         | 35                | 45   | 80         | 193        |
| 05:00 PM   | 75                 | 7    | 82         | 9                      | 27   | 36         | 26                | 38   | 64         | 182        |
| 05:15 PM   | 44                 | 11   | 55         | 3                      | 32   | 35         | 37                | 56   | 93         | 183        |
| Total Volume   | 247                | 48   | 295        | 33                     | 110  | 143        | 128               | 180  | 308        | 746        |
| % App. Total   | 83.7               | 16.3 |            | 23.1                   | 76.9 |            | 41.6              | 58.4 |            |            |
| PHF  | .823               | .800 | .838       | .688                   | .859 | .831       | .865              | .804 | .828       | .966       |
| Passenger  | 222                | 46   | 268        | 33                     | 108  | 141        | 124               | 158  | 282        | 691        |
| % Passenger  | 89.9               | 95.8 | 90.8       | 100                    | 98.2 | 98.6       | 96.9              | 87.8 | 91.6       | 92.6       |
| + Trucks   | 25                 | 2    | 27         | 0                      | 2    | 2          | 4                 | 22   | 26         | 55         |
| % + Trucks   | 10.1               | 4.2  | 9.2        | 0                      | 1.8  | 1.4        | 3.1               | 12.2 | 8.4        | 7.4        |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517d  
Site Code : 00004517  
Start Date : 10/15/2020  
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## Groups Printed- Passenger - + Trucks

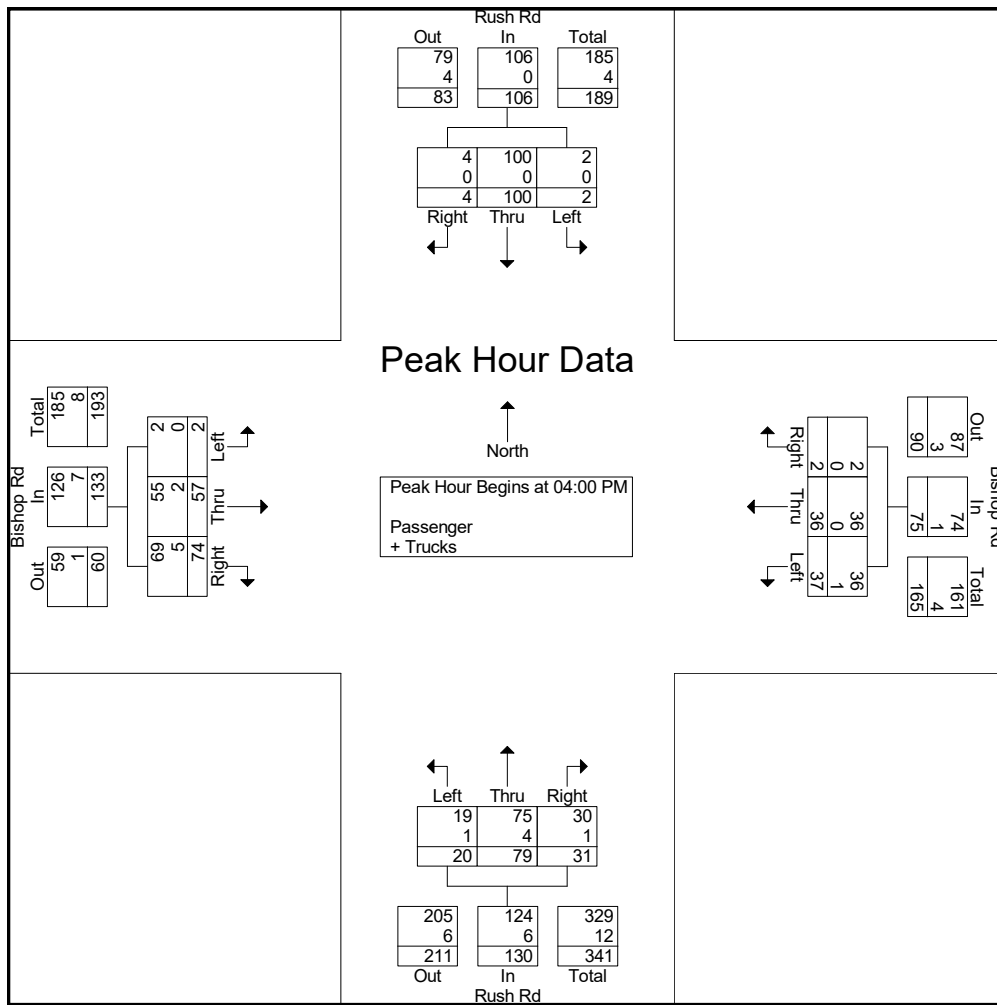
| Start Time  | Rush Rd Southbound |      |      |            | Bishop Rd Westbound |      |      |            | Rush Rd Northbound |      |      |            | Bishop Rd Eastbound |      |      |            | Int. Total |
|-------------|--------------------|------|------|------------|---------------------|------|------|------------|--------------------|------|------|------------|---------------------|------|------|------------|------------|
|             | Right              | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right              | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| 04:00 PM    | 0                  | 22   | 0    | 22         | 0                   | 15   | 10   | 25         | 5                  | 19   | 5    | 29         | 16                  | 13   | 0    | 29         | 105        |
| 04:15 PM    | 0                  | 24   | 0    | 24         | 1                   | 8    | 3    | 12         | 10                 | 17   | 3    | 30         | 19                  | 19   | 1    | 39         | 105        |
| 04:30 PM    | 1                  | 35   | 1    | 37         | 0                   | 7    | 11   | 18         | 10                 | 19   | 4    | 33         | 19                  | 10   | 0    | 29         | 117        |
| 04:45 PM    | 3                  | 19   | 1    | 23         | 1                   | 6    | 13   | 20         | 6                  | 24   | 8    | 38         | 20                  | 15   | 1    | 36         | 117        |
| Total       | 4                  | 100  | 2    | 106        | 2                   | 36   | 37   | 75         | 31                 | 79   | 20   | 130        | 74                  | 57   | 2    | 133        | 444        |
| 05:00 PM    | 0                  | 24   | 2    | 26         | 1                   | 10   | 6    | 17         | 10                 | 9    | 3    | 22         | 28                  | 12   | 0    | 40         | 105        |
| 05:15 PM    | 0                  | 18   | 3    | 21         | 0                   | 11   | 9    | 20         | 11                 | 19   | 4    | 34         | 14                  | 12   | 1    | 27         | 102        |
| 05:30 PM    | 0                  | 13   | 0    | 13         | 0                   | 1    | 6    | 7          | 7                  | 6    | 2    | 15         | 7                   | 12   | 0    | 19         | 54         |
| 05:45 PM    | 0                  | 21   | 0    | 21         | 0                   | 3    | 12   | 15         | 8                  | 14   | 2    | 24         | 7                   | 4    | 1    | 12         | 72         |
| Total       | 0                  | 76   | 5    | 81         | 1                   | 25   | 33   | 59         | 36                 | 48   | 11   | 95         | 56                  | 40   | 2    | 98         | 333        |
| Grand Total | 4                  | 176  | 7    | 187        | 3                   | 61   | 70   | 134        | 67                 | 127  | 31   | 225        | 130                 | 97   | 4    | 231        | 777        |
| Apprch %    | 2.1                | 94.1 | 3.7  |            | 2.2                 | 45.5 | 52.2 |            | 29.8               | 56.4 | 13.8 |            | 56.3                | 42   | 1.7  |            |            |
| Total %     | 0.5                | 22.7 | 0.9  | 24.1       | 0.4                 | 7.9  | 9    | 17.2       | 8.6                | 16.3 | 4    | 29         | 16.7                | 12.5 | 0.5  | 29.7       |            |
| Passenger   | 4                  | 174  | 6    | 184        | 3                   | 60   | 67   | 130        | 66                 | 123  | 30   | 219        | 121                 | 94   | 4    | 219        | 752        |
| % Passenger | 100                | 98.9 | 85.7 | 98.4       | 100                 | 98.4 | 95.7 | 97         | 98.5               | 96.9 | 96.8 | 97.3       | 93.1                | 96.9 | 100  | 94.8       | 96.8       |
| + Trucks    | 0                  | 2    | 1    | 3          | 0                   | 1    | 3    | 4          | 1                  | 4    | 1    | 6          | 9                   | 3    | 0    | 12         | 25         |
| % + Trucks  | 0                  | 1.1  | 14.3 | 1.6        | 0                   | 1.6  | 4.3  | 3          | 1.5                | 3.1  | 3.2  | 2.7        | 6.9                 | 3.1  | 0    | 5.2        | 3.2        |

# Heath & Associates

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File Name : 4517d  
Site Code : 00004517  
Start Date : 10/15/2020  
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| Start Time   | Rush Rd Southbound |      |      |            | Bishop Rd Westbound |      |      |            | Rush Rd Northbound |      |      |            | Bishop Rd Eastbound |      |      |            | Int. Total |
|--|--------------------|------|------|------------|---------------------|------|------|------------|--------------------|------|------|------------|---------------------|------|------|------------|------------|
|  | Right              | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right              | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                    |      |      |            |                     |      |      |            |                    |      |      |            |                     |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:00 PM       |                    |      |      |            |                     |      |      |            |                    |      |      |            |                     |      |      |            |            |
| 04:00 PM   | 0                  | 22   | 0    | 22         | 0                   | 15   | 10   | 25         | 5                  | 19   | 5    | 29         | 16                  | 13   | 0    | 29         | 105        |
| 04:15 PM   | 0                  | 24   | 0    | 24         | 1                   | 8    | 3    | 12         | 10                 | 17   | 3    | 30         | 19                  | 19   | 1    | 39         | 105        |
| 04:30 PM   | 1                  | 35   | 1    | 37         | 0                   | 7    | 11   | 18         | 10                 | 19   | 4    | 33         | 19                  | 10   | 0    | 29         | 117        |
| 04:45 PM   | 3                  | 19   | 1    | 23         | 1                   | 6    | 13   | 20         | 6                  | 24   | 8    | 38         | 20                  | 15   | 1    | 36         | 117        |
| Total Volume   | 4                  | 100  | 2    | 106        | 2                   | 36   | 37   | 75         | 31                 | 79   | 20   | 130        | 74                  | 57   | 2    | 133        | 444        |
| % App. Total   | 3.8                | 94.3 | 1.9  |            | 2.7                 | 48   | 49.3 |            | 23.8               | 60.8 | 15.4 |            | 55.6                | 42.9 | 1.5  |            |            |
| PHF  | .333               | .714 | .500 | .716       | .500                | .600 | .712 | .750       | .775               | .823 | .625 | .855       | .925                | .750 | .500 | .853       | .949       |
| Passenger  | 4                  | 100  | 2    | 106        | 2                   | 36   | 36   | 74         | 30                 | 75   | 19   | 124        | 69                  | 55   | 2    | 126        | 430        |
| % Passenger  | 100                | 100  | 100  | 100        | 100                 | 100  | 97.3 | 98.7       | 96.8               | 94.9 | 95.0 | 95.4       | 93.2                | 96.5 | 100  | 94.7       | 96.8       |
| + Trucks   | 0                  | 0    | 0    | 0          | 0                   | 0    | 1    | 1          | 1                  | 4    | 1    | 6          | 5                   | 2    | 0    | 7          | 14         |
| % + Trucks   | 0                  | 0    | 0    | 0          | 0                   | 0    | 2.7  | 1.3        | 3.2                | 5.1  | 5.0  | 4.6        | 6.8                 | 3.5  | 0    | 5.3        | 3.2        |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517e  
Site Code : 00004517  
Start Date : 10/15/2020  
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Groups Printed- Passenger - + Trucks

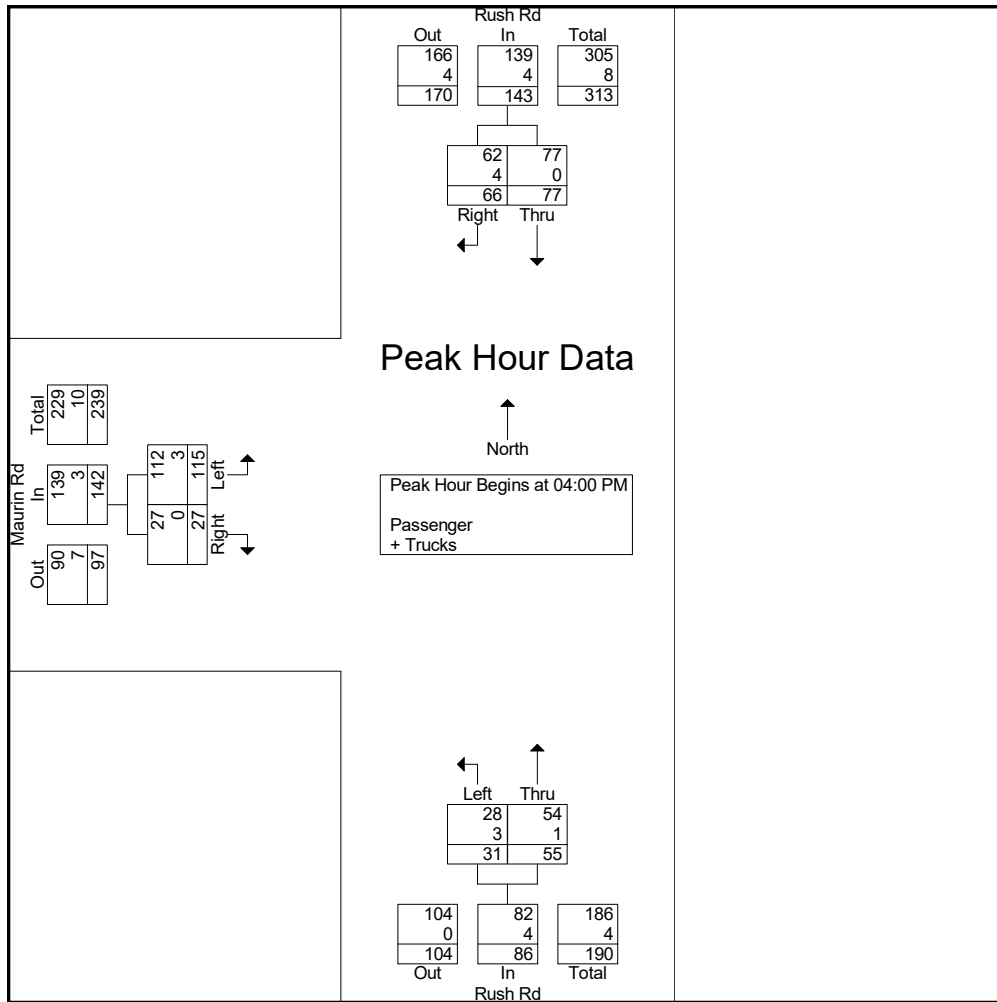
| Start Time  | Rush Rd Southbound |      |            | Rush Rd Northbound |      |            | Maurin Rd Eastbound |      |            | Int. Total |
|-------------|--------------------|------|------------|--------------------|------|------------|---------------------|------|------------|------------|
|             | Right              | Thru | App. Total | Thru               | Left | App. Total | Right               | Left | App. Total |            |
| 04:00 PM    | 11                 | 17   | 28         | 16                 | 6    | 22         | 3                   | 33   | 36         | 86         |
| 04:15 PM    | 16                 | 25   | 41         | 10                 | 7    | 17         | 4                   | 30   | 34         | 92         |
| 04:30 PM    | 16                 | 22   | 38         | 13                 | 7    | 20         | 14                  | 29   | 43         | 101        |
| 04:45 PM    | 23                 | 13   | 36         | 16                 | 11   | 27         | 6                   | 23   | 29         | 92         |
| Total       | 66                 | 77   | 143        | 55                 | 31   | 86         | 27                  | 115  | 142        | 371        |
| 05:00 PM    | 13                 | 23   | 36         | 8                  | 2    | 10         | 7                   | 31   | 38         | 84         |
| 05:15 PM    | 16                 | 17   | 33         | 17                 | 1    | 18         | 3                   | 26   | 29         | 80         |
| 05:30 PM    | 15                 | 14   | 29         | 4                  | 2    | 6          | 1                   | 21   | 22         | 57         |
| 05:45 PM    | 11                 | 19   | 30         | 16                 | 0    | 16         | 0                   | 16   | 16         | 62         |
| Total       | 55                 | 73   | 128        | 45                 | 5    | 50         | 11                  | 94   | 105        | 283        |
| Grand Total | 121                | 150  | 271        | 100                | 36   | 136        | 38                  | 209  | 247        | 654        |
| Apprch %    | 44.6               | 55.4 |            | 73.5               | 26.5 |            | 15.4                | 84.6 |            |            |
| Total %     | 18.5               | 22.9 | 41.4       | 15.3               | 5.5  | 20.8       | 5.8                 | 32   | 37.8       |            |
| Passenger   | 116                | 149  | 265        | 99                 | 33   | 132        | 36                  | 199  | 235        | 632        |
| % Passenger | 95.9               | 99.3 | 97.8       | 99                 | 91.7 | 97.1       | 94.7                | 95.2 | 95.1       | 96.6       |
| + Trucks    | 5                  | 1    | 6          | 1                  | 3    | 4          | 2                   | 10   | 12         | 22         |
| % + Trucks  | 4.1                | 0.7  | 2.2        | 1                  | 8.3  | 2.9        | 5.3                 | 4.8  | 4.9        | 3.4        |

# Heath & Associates

2214 Tacoma Rd E  
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File Name : 4517e  
Site Code : 00004517  
Start Date : 10/15/2020  
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| Start Time   | Rush Rd Southbound |      |            | Rush Rd Northbound |      |            | Maurin Rd Eastbound |      |            | Int. Total |
|--|--------------------|------|------------|--------------------|------|------------|---------------------|------|------------|------------|
|  | Right              | Thru | App. Total | Thru               | Left | App. Total | Right               | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                    |      |            |                    |      |            |                     |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:00 PM       |                    |      |            |                    |      |            |                     |      |            |            |
| 04:00 PM   | 11                 | 17   | 28         | 16                 | 6    | 22         | 3                   | 33   | 36         | 86         |
| 04:15 PM   | 16                 | 25   | 41         | 10                 | 7    | 17         | 4                   | 30   | 34         | 92         |
| 04:30 PM   | 16                 | 22   | 38         | 13                 | 7    | 20         | 14                  | 29   | 43         | 101        |
| 04:45 PM   | 23                 | 13   | 36         | 16                 | 11   | 27         | 6                   | 23   | 29         | 92         |
| Total Volume   | 66                 | 77   | 143        | 55                 | 31   | 86         | 27                  | 115  | 142        | 371        |
| % App. Total   | 46.2               | 53.8 |            | 64                 | 36   |            | 19                  | 81   |            |            |
| PHF  | .717               | .770 | .872       | .859               | .705 | .796       | .482                | .871 | .826       | .918       |
| Passenger  | 62                 | 77   | 139        | 54                 | 28   | 82         | 27                  | 112  | 139        | 360        |
| % Passenger  | 93.9               | 100  | 97.2       | 98.2               | 90.3 | 95.3       | 100                 | 97.4 | 97.9       | 97.0       |
| + Trucks   | 4                  | 0    | 4          | 1                  | 3    | 4          | 0                   | 3    | 3          | 11         |
| % + Trucks   | 6.1                | 0    | 2.8        | 1.8                | 9.7  | 4.7        | 0                   | 2.6  | 2.1        | 3.0        |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517f  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 1

## Groups Printed- Passenger - + Trucks

| Start Time  | Jackson Hwy Westbound |      |            | Rush Rd Northbound |      |            | Jackson Hwy Eastbound |      |            | Int. Total |
|-------------|-----------------------|------|------------|--------------------|------|------------|-----------------------|------|------------|------------|
|             | Thru                  | Left | App. Total | Right              | Left | App. Total | Right                 | Thru | App. Total |            |
| 04:00 PM    | 41                    | 9    | 50         | 22                 | 22   | 44         | 22                    | 56   | 78         | 172        |
| 04:15 PM    | 34                    | 14   | 48         | 23                 | 18   | 41         | 23                    | 65   | 88         | 177        |
| 04:30 PM    | 42                    | 13   | 55         | 22                 | 20   | 42         | 26                    | 64   | 90         | 187        |
| 04:45 PM    | 27                    | 13   | 40         | 20                 | 21   | 41         | 23                    | 75   | 98         | 179        |
| Total       | 144                   | 49   | 193        | 87                 | 81   | 168        | 94                    | 260  | 354        | 715        |
| 05:00 PM    | 30                    | 8    | 38         | 24                 | 17   | 41         | 27                    | 75   | 102        | 181        |
| 05:15 PM    | 27                    | 15   | 42         | 21                 | 21   | 42         | 18                    | 68   | 86         | 170        |
| 05:30 PM    | 21                    | 16   | 37         | 12                 | 14   | 26         | 12                    | 61   | 73         | 136        |
| 05:45 PM    | 33                    | 12   | 45         | 14                 | 14   | 28         | 16                    | 34   | 50         | 123        |
| Total       | 111                   | 51   | 162        | 71                 | 66   | 137        | 73                    | 238  | 311        | 610        |
| Grand Total | 255                   | 100  | 355        | 158                | 147  | 305        | 167                   | 498  | 665        | 1325       |
| Apprch %    | 71.8                  | 28.2 |            | 51.8               | 48.2 |            | 25.1                  | 74.9 |            |            |
| Total %     | 19.2                  | 7.5  | 26.8       | 11.9               | 11.1 | 23         | 12.6                  | 37.6 | 50.2       |            |
| Passenger   | 250                   | 94   | 344        | 154                | 139  | 293        | 166                   | 497  | 663        | 1300       |
| % Passenger | 98                    | 94   | 96.9       | 97.5               | 94.6 | 96.1       | 99.4                  | 99.8 | 99.7       | 98.1       |
| + Trucks    | 5                     | 6    | 11         | 4                  | 8    | 12         | 1                     | 1    | 2          | 25         |
| % + Trucks  | 2                     | 6    | 3.1        | 2.5                | 5.4  | 3.9        | 0.6                   | 0.2  | 0.3        | 1.9        |

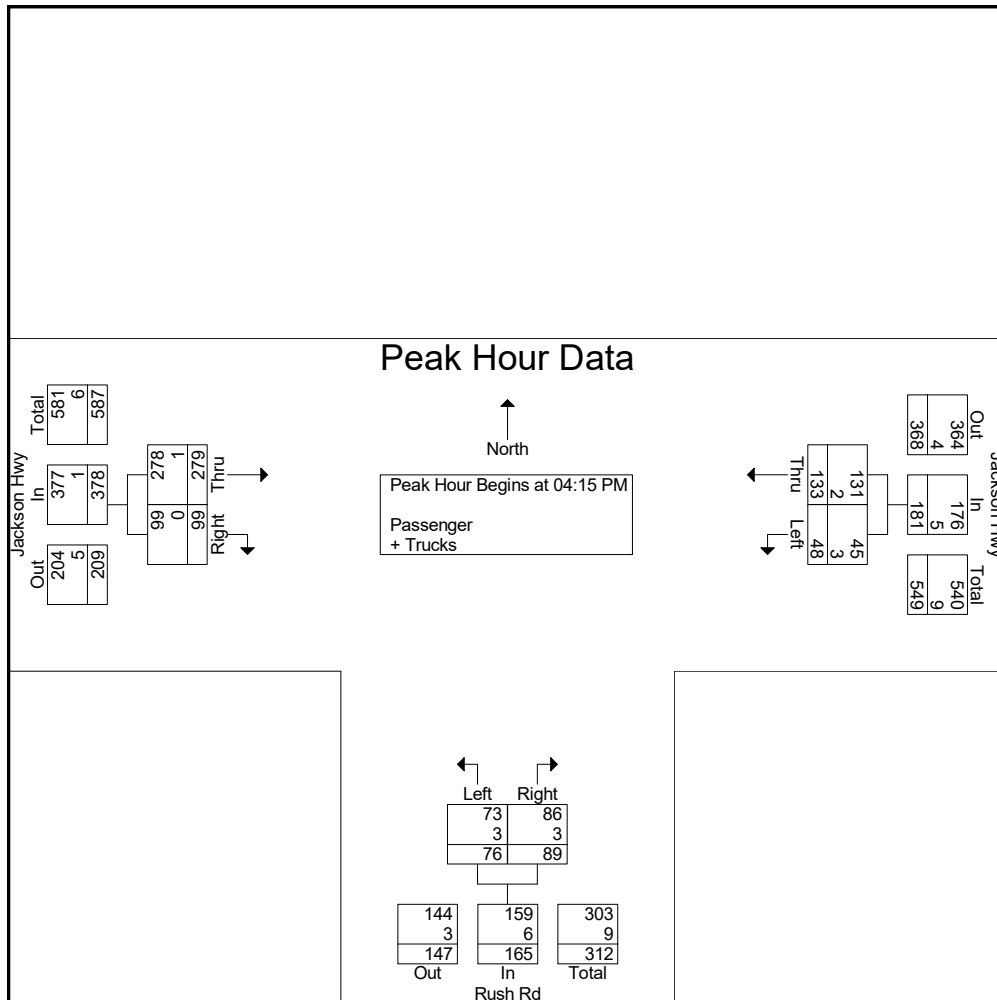


# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517f  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 2

| Start Time   | Jackson Hwy Westbound |      |            | Rush Rd Northbound |      |            | Jackson Hwy Eastbound |      |            | Int. Total |
|--|-----------------------|------|------------|--------------------|------|------------|-----------------------|------|------------|------------|
|  | Thru                  | Left | App. Total | Right              | Left | App. Total | Right                 | Thru | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1<br>Peak Hour for Entire Intersection Begins at 04:15 PM |                       |      |            |                    |      |            |                       |      |            |            |
| 04:15 PM   | 34                    | 14   | 48         | 23                 | 18   | 41         | 23                    | 65   | 88         | 177        |
| 04:30 PM   | 42                    | 13   | 55         | 22                 | 20   | 42         | 26                    | 64   | 90         | 187        |
| 04:45 PM   | 27                    | 13   | 40         | 20                 | 21   | 41         | 23                    | 75   | 98         | 179        |
| 05:00 PM   | 30                    | 8    | 38         | 24                 | 17   | 41         | 27                    | 75   | 102        | 181        |
| Total Volume   | 133                   | 48   | 181        | 89                 | 76   | 165        | 99                    | 279  | 378        | 724        |
| % App. Total   | 73.5                  | 26.5 |            | 53.9               | 46.1 |            | 26.2                  | 73.8 |            |            |
| PHF  | .792                  | .857 | .823       | .927               | .905 | .982       | .917                  | .930 | .926       | .968       |
| Passenger  | 131                   | 45   | 176        | 86                 | 73   | 159        | 99                    | 278  | 377        | 712        |
| % Passenger  | 98.5                  | 93.8 | 97.2       | 96.6               | 96.1 | 96.4       | 100                   | 99.6 | 99.7       | 98.3       |
| + Trucks   | 2                     | 3    | 5          | 3                  | 3    | 6          | 0                     | 1    | 1          | 12         |
| % + Trucks   | 1.5                   | 6.3  | 2.8        | 3.4                | 3.9  | 3.6        | 0                     | 0.4  | 0.3        | 1.7        |



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2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517g  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 1

## Groups Printed- Passenger - + Trucks

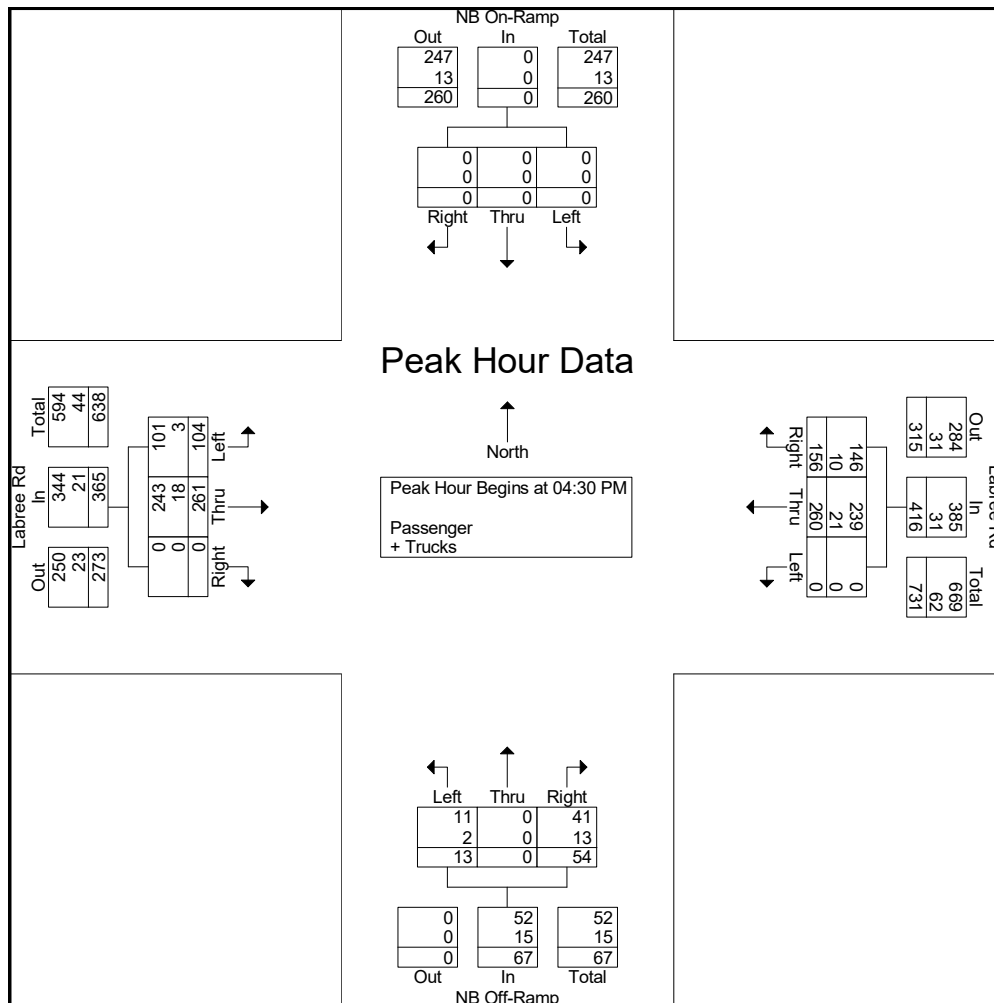
| Start Time  | NB On-Ramp Southbound |      |      |            | Labree Rd Westbound |      |      |            | NB Off-Ramp Northbound |      |      |            | Labree Rd Eastbound |      |      |            | Int. Total |
|-------------|-----------------------|------|------|------------|---------------------|------|------|------------|------------------------|------|------|------------|---------------------|------|------|------------|------------|
|             | Right                 | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right                  | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| 04:00 PM    | 0                     | 0    | 0    | 0          | 34                  | 52   | 0    | 86         | 20                     | 1    | 4    | 25         | 0                   | 62   | 17   | 79         | 190        |
| 04:15 PM    | 0                     | 0    | 0    | 0          | 37                  | 59   | 0    | 96         | 13                     | 0    | 3    | 16         | 0                   | 61   | 22   | 83         | 195        |
| 04:30 PM    | 0                     | 0    | 0    | 0          | 56                  | 86   | 0    | 142        | 11                     | 0    | 2    | 13         | 0                   | 71   | 16   | 87         | 242        |
| 04:45 PM    | 0                     | 0    | 0    | 0          | 39                  | 39   | 0    | 78         | 9                      | 0    | 3    | 12         | 0                   | 82   | 28   | 110        | 200        |
| Total       | 0                     | 0    | 0    | 0          | 166                 | 236  | 0    | 402        | 53                     | 1    | 12   | 66         | 0                   | 276  | 83   | 359        | 827        |
| 05:00 PM    | 0                     | 0    | 0    | 0          | 30                  | 66   | 0    | 96         | 17                     | 0    | 4    | 21         | 0                   | 52   | 33   | 85         | 202        |
| 05:15 PM    | 0                     | 0    | 0    | 0          | 31                  | 69   | 0    | 100        | 17                     | 0    | 4    | 21         | 0                   | 56   | 27   | 83         | 204        |
| 05:30 PM    | 0                     | 0    | 0    | 0          | 22                  | 45   | 0    | 67         | 16                     | 2    | 0    | 18         | 0                   | 41   | 34   | 75         | 160        |
| 05:45 PM    | 0                     | 0    | 0    | 0          | 12                  | 29   | 0    | 41         | 19                     | 0    | 1    | 20         | 0                   | 34   | 16   | 50         | 111        |
| Total       | 0                     | 0    | 0    | 0          | 95                  | 209  | 0    | 304        | 69                     | 2    | 9    | 80         | 0                   | 183  | 110  | 293        | 677        |
| Grand Total | 0                     | 0    | 0    | 0          | 261                 | 445  | 0    | 706        | 122                    | 3    | 21   | 146        | 0                   | 459  | 193  | 652        | 1504       |
| Apprch %    | 0                     | 0    | 0    | 0          | 37                  | 63   | 0    |            | 83.6                   | 2.1  | 14.4 |            | 0                   | 70.4 | 29.6 |            |            |
| Total %     | 0                     | 0    | 0    | 0          | 17.4                | 29.6 | 0    | 46.9       | 8.1                    | 0.2  | 1.4  | 9.7        | 0                   | 30.5 | 12.8 | 43.4       |            |
| Passenger   | 0                     | 0    | 0    | 0          | 236                 | 415  | 0    | 651        | 90                     | 2    | 18   | 110        | 0                   | 423  | 184  | 607        | 1368       |
| % Passenger | 0                     | 0    | 0    | 0          | 90.4                | 93.3 | 0    | 92.2       | 73.8                   | 66.7 | 85.7 | 75.3       | 0                   | 92.2 | 95.3 | 93.1       | 91         |
| + Trucks    | 0                     | 0    | 0    | 0          | 25                  | 30   | 0    | 55         | 32                     | 1    | 3    | 36         | 0                   | 36   | 9    | 45         | 136        |
| % + Trucks  | 0                     | 0    | 0    | 0          | 9.6                 | 6.7  | 0    | 7.8        | 26.2                   | 33.3 | 14.3 | 24.7       | 0                   | 7.8  | 4.7  | 6.9        | 9          |

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2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517g  
Site Code : 00004517  
Start Date : 10/15/2020  
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| Start Time   | NB On-Ramp Southbound |      |      |            | Labree Rd Westbound |      |      |            | NB Off-Ramp Northbound |      |      |            | Labree Rd Eastbound |      |      |            | Int. Total |
|--|-----------------------|------|------|------------|---------------------|------|------|------------|------------------------|------|------|------------|---------------------|------|------|------------|------------|
|  | Right                 | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right                  | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                       |      |      |            |                     |      |      |            |                        |      |      |            |                     |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                       |      |      |            |                     |      |      |            |                        |      |      |            |                     |      |      |            |            |
| 04:30 PM   | 0                     | 0    | 0    | 0          | 56                  | 86   | 0    | 142        | 11                     | 0    | 2    | 13         | 0                   | 71   | 16   | 87         | 242        |
| 04:45 PM   | 0                     | 0    | 0    | 0          | 39                  | 39   | 0    | 78         | 9                      | 0    | 3    | 12         | 0                   | 82   | 28   | 110        | 200        |
| 05:00 PM   | 0                     | 0    | 0    | 0          | 30                  | 66   | 0    | 96         | 17                     | 0    | 4    | 21         | 0                   | 52   | 33   | 85         | 202        |
| 05:15 PM   | 0                     | 0    | 0    | 0          | 31                  | 69   | 0    | 100        | 17                     | 0    | 4    | 21         | 0                   | 56   | 27   | 83         | 204        |
| Total Volume   | 0                     | 0    | 0    | 0          | 156                 | 260  | 0    | 416        | 54                     | 0    | 13   | 67         | 0                   | 261  | 104  | 365        | 848        |
| % App. Total   | 0                     | 0    | 0    | 0          | 37.5                | 62.5 | 0    |            | 80.6                   | 0    | 19.4 |            | 0                   | 71.5 | 28.5 |            |            |
| PHF  | .000                  | .000 | .000 | .000       | .696                | .756 | .000 | .732       | .794                   | .000 | .813 | .798       | .000                | .796 | .788 | .830       | .876       |
| Passenger  | 0                     | 0    | 0    | 0          | 146                 | 239  | 0    | 385        | 41                     | 0    | 11   | 52         | 0                   | 243  | 101  | 344        | 781        |
| % Passenger  | 0                     | 0    | 0    | 0          | 93.6                | 91.9 | 0    | 92.5       | 75.9                   | 0    | 84.6 | 77.6       | 0                   | 93.1 | 97.1 | 94.2       | 92.1       |
| + Trucks   | 0                     | 0    | 0    | 0          | 10                  | 21   | 0    | 31         | 13                     | 0    | 2    | 15         | 0                   | 18   | 3    | 21         | 67         |
| % + Trucks   | 0                     | 0    | 0    | 0          | 6.4                 | 8.1  | 0    | 7.5        | 24.1                   | 0    | 15.4 | 22.4       | 0                   | 6.9  | 2.9  | 5.8        | 7.9        |



# Heath & Associates

2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517h  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 1

## Groups Printed- Passenger - + Trucks

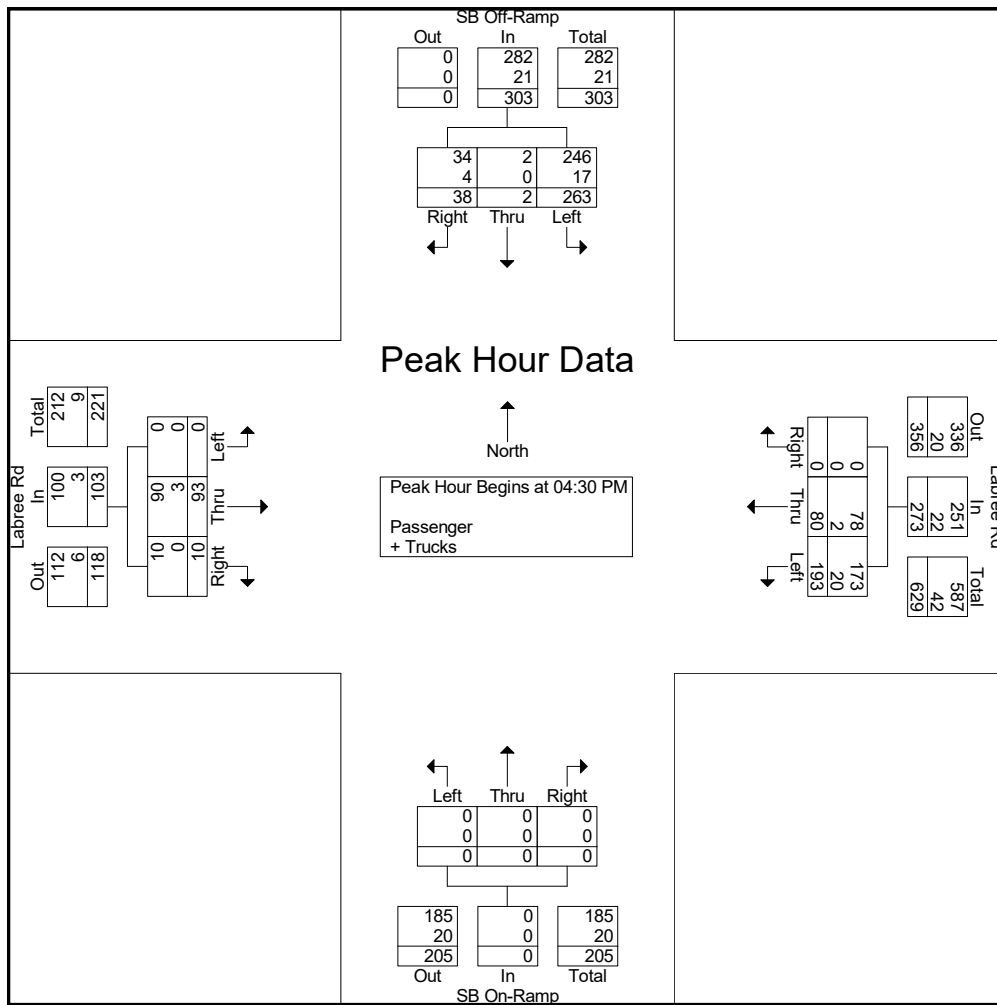
| Start Time  | SB Off-Ramp Southbound |      |      |            | Labree Rd Westbound |      |      |            | SB On-Ramp Northbound |      |      |            | Labree Rd Eastbound |      |      |            | Int. Total |
|-------------|------------------------|------|------|------------|---------------------|------|------|------------|-----------------------|------|------|------------|---------------------|------|------|------------|------------|
|             | Right                  | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right                 | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| 04:00 PM    | 6                      | 0    | 59   | 65         | 0                   | 10   | 51   | 61         | 0                     | 0    | 0    | 0          | 5                   | 16   | 0    | 21         | 147        |
| 04:15 PM    | 10                     | 0    | 67   | 77         | 0                   | 17   | 35   | 52         | 0                     | 0    | 0    | 0          | 3                   | 21   | 0    | 24         | 153        |
| 04:30 PM    | 8                      | 1    | 65   | 74         | 0                   | 20   | 67   | 87         | 0                     | 0    | 0    | 0          | 3                   | 11   | 0    | 14         | 175        |
| 04:45 PM    | 9                      | 1    | 84   | 94         | 0                   | 11   | 34   | 45         | 0                     | 0    | 0    | 0          | 2                   | 24   | 0    | 26         | 165        |
| Total       | 33                     | 2    | 275  | 310        | 0                   | 58   | 187  | 245        | 0                     | 0    | 0    | 0          | 13                  | 72   | 0    | 85         | 640        |
| 05:00 PM    | 8                      | 0    | 54   | 62         | 0                   | 23   | 45   | 68         | 0                     | 0    | 0    | 0          | 4                   | 37   | 0    | 41         | 171        |
| 05:15 PM    | 13                     | 0    | 60   | 73         | 0                   | 26   | 47   | 73         | 0                     | 0    | 0    | 0          | 1                   | 21   | 0    | 22         | 168        |
| 05:30 PM    | 11                     | 0    | 60   | 71         | 0                   | 7    | 40   | 47         | 0                     | 0    | 0    | 0          | 2                   | 23   | 0    | 25         | 143        |
| 05:45 PM    | 7                      | 1    | 36   | 44         | 0                   | 12   | 19   | 31         | 0                     | 0    | 0    | 0          | 2                   | 14   | 0    | 16         | 91         |
| Total       | 39                     | 1    | 210  | 250        | 0                   | 68   | 151  | 219        | 0                     | 0    | 0    | 0          | 9                   | 95   | 0    | 104        | 573        |
| Grand Total | 72                     | 3    | 485  | 560        | 0                   | 126  | 338  | 464        | 0                     | 0    | 0    | 0          | 22                  | 167  | 0    | 189        | 1213       |
| Apprch %    | 12.9                   | 0.5  | 86.6 |            | 0                   | 27.2 | 72.8 |            | 0                     | 0    | 0    |            | 11.6                | 88.4 | 0    |            |            |
| Total %     | 5.9                    | 0.2  | 40   | 46.2       | 0                   | 10.4 | 27.9 | 38.3       | 0                     | 0    | 0    | 0          | 1.8                 | 13.8 | 0    | 15.6       |            |
| Passenger   | 63                     | 3    | 451  | 517        | 0                   | 122  | 312  | 434        | 0                     | 0    | 0    | 0          | 20                  | 156  | 0    | 176        | 1127       |
| % Passenger | 87.5                   | 100  | 93   | 92.3       | 0                   | 96.8 | 92.3 | 93.5       | 0                     | 0    | 0    | 0          | 90.9                | 93.4 | 0    | 93.1       | 92.9       |
| + Trucks    | 9                      | 0    | 34   | 43         | 0                   | 4    | 26   | 30         | 0                     | 0    | 0    | 0          | 2                   | 11   | 0    | 13         | 86         |
| % + Trucks  | 12.5                   | 0    | 7    | 7.7        | 0                   | 3.2  | 7.7  | 6.5        | 0                     | 0    | 0    | 0          | 9.1                 | 6.6  | 0    | 6.9        | 7.1        |

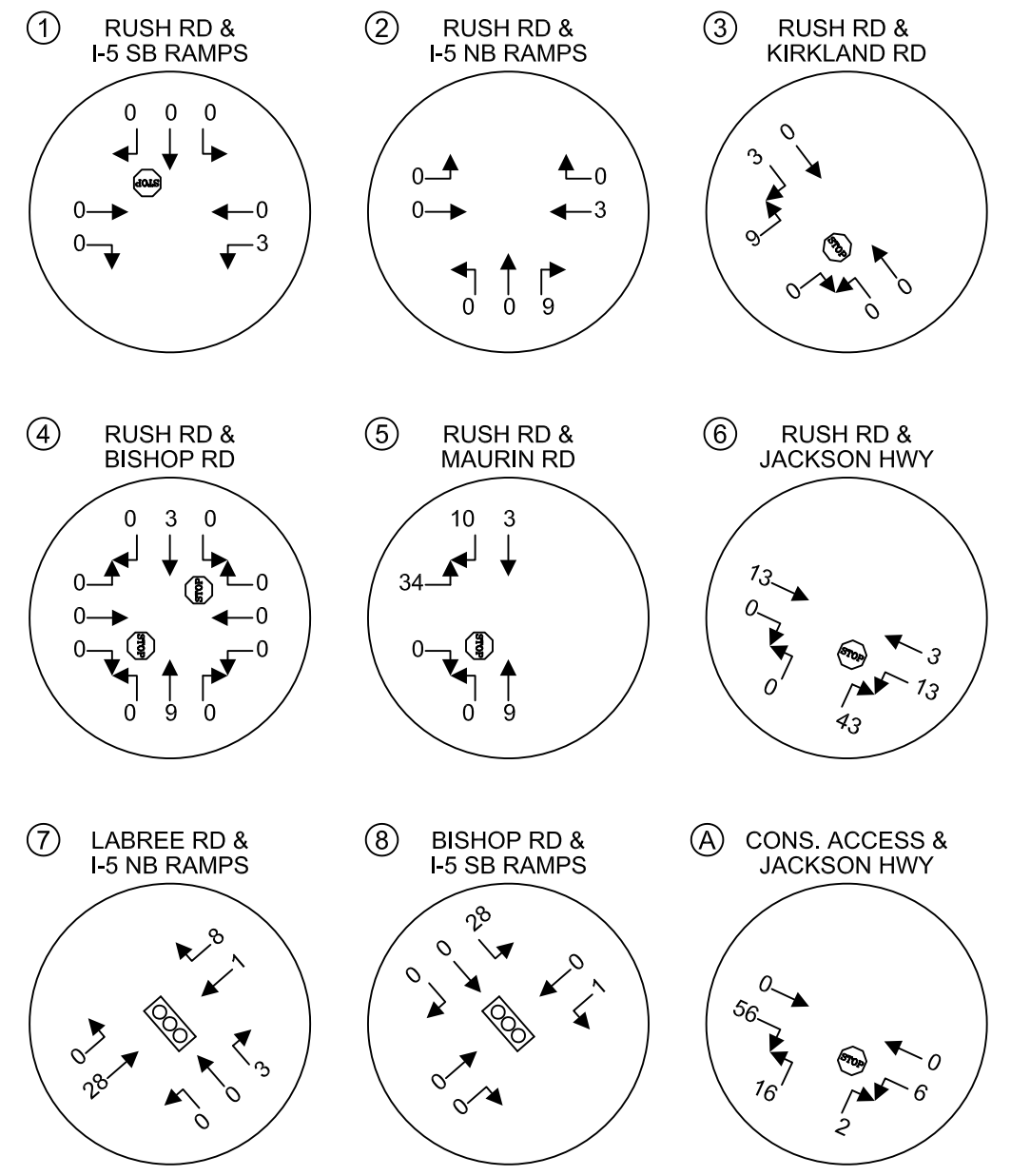
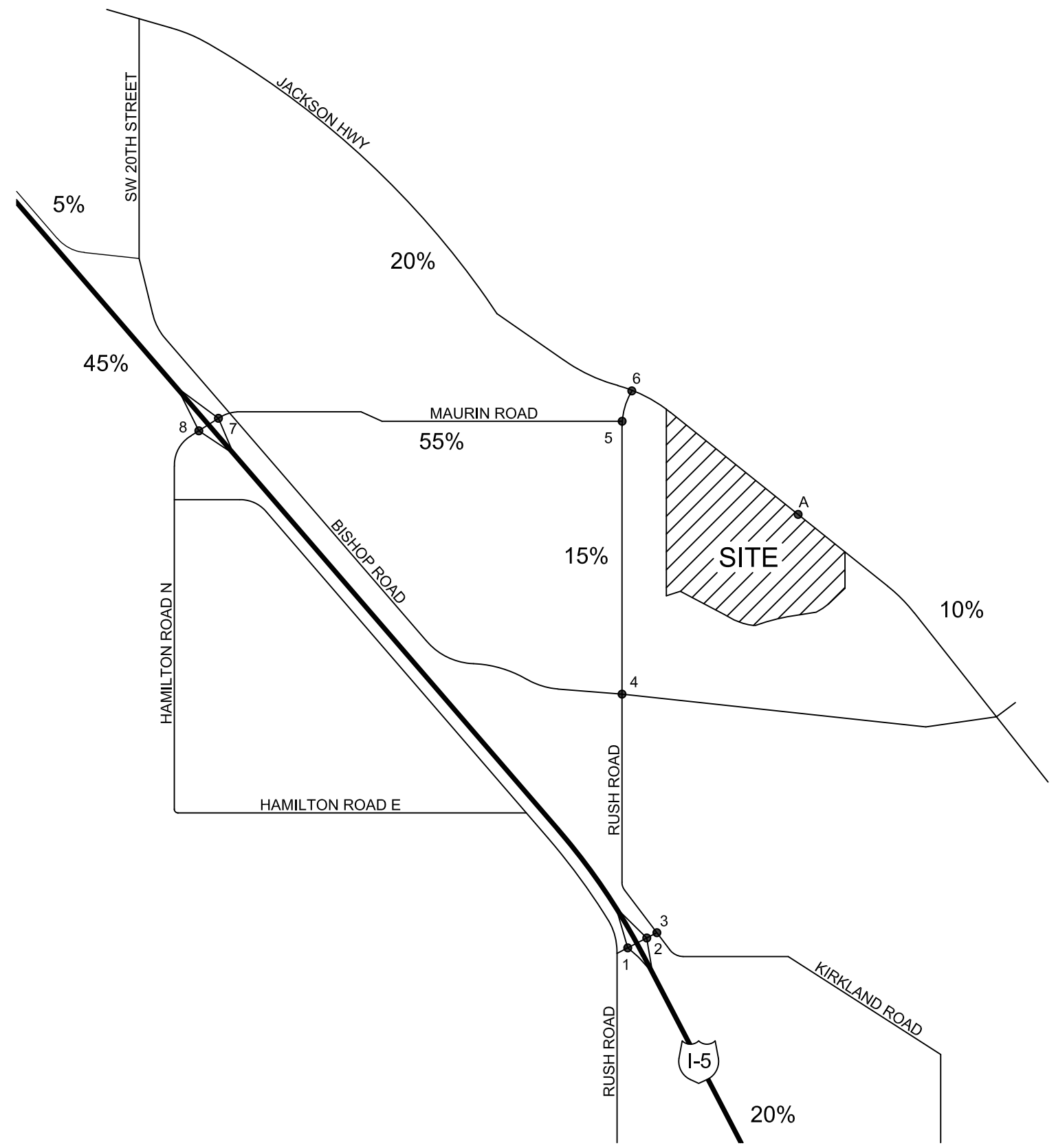
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2214 Tacoma Rd E  
Puyallup, WA 98371

File Name : 4517h  
Site Code : 00004517  
Start Date : 10/15/2020  
Page No : 2

| Start Time   | SB Off-Ramp Southbound |      |      |            | Labree Rd Westbound |      |      |            | SB On-Ramp Northbound |      |      |            | Labree Rd Eastbound |      |      |            | Int. Total |
|--|------------------------|------|------|------------|---------------------|------|------|------------|-----------------------|------|------|------------|---------------------|------|------|------------|------------|
|  | Right                  | Thru | Left | App. Total | Right               | Thru | Left | App. Total | Right                 | Thru | Left | App. Total | Right               | Thru | Left | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                        |      |      |            |                     |      |      |            |                       |      |      |            |                     |      |      |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                        |      |      |            |                     |      |      |            |                       |      |      |            |                     |      |      |            |            |
| 04:30 PM   | 8                      | 1    | 65   | 74         | 0                   | 20   | 67   | 87         | 0                     | 0    | 0    | 0          | 3                   | 11   | 0    | 14         | 175        |
| 04:45 PM   | 9                      | 1    | 84   | 94         | 0                   | 11   | 34   | 45         | 0                     | 0    | 0    | 0          | 2                   | 24   | 0    | 26         | 165        |
| 05:00 PM   | 8                      | 0    | 54   | 62         | 0                   | 23   | 45   | 68         | 0                     | 0    | 0    | 0          | 4                   | 37   | 0    | 41         | 171        |
| 05:15 PM   | 13                     | 0    | 60   | 73         | 0                   | 26   | 47   | 73         | 0                     | 0    | 0    | 0          | 1                   | 21   | 0    | 22         | 168        |
| Total Volume   | 38                     | 2    | 263  | 303        | 0                   | 80   | 193  | 273        | 0                     | 0    | 0    | 0          | 10                  | 93   | 0    | 103        | 679        |
| % App. Total   | 12.5                   | 0.7  | 86.8 |            | 0                   | 29.3 | 70.7 |            | 0                     | 0    | 0    |            | 9.7                 | 90.3 | 0    |            |            |
| PHF  | .731                   | .500 | .783 | .806       | .000                | .769 | .720 | .784       | .000                  | .000 | .000 | .000       | .625                | .628 | .000 | .628       | .970       |
| Passenger  | 34                     | 2    | 246  | 282        | 0                   | 78   | 173  | 251        | 0                     | 0    | 0    | 0          | 10                  | 90   | 0    | 100        | 633        |
| % Passenger  | 89.5                   | 100  | 93.5 | 93.1       | 0                   | 97.5 | 89.6 | 91.9       | 0                     | 0    | 0    | 0          | 100                 | 96.8 | 0    | 97.1       | 93.2       |
| + Trucks   | 4                      | 0    | 17   | 21         | 0                   | 2    | 20   | 22         | 0                     | 0    | 0    | 0          | 0                   | 3    | 0    | 3          | 46         |
| % + Trucks   | 10.5                   | 0    | 6.5  | 6.9        | 0                   | 2.5  | 10.4 | 8.1        | 0                     | 0    | 0    | 0          | 0                   | 3.2  | 0    | 2.9        | 6.8        |





**NEW AM PEAK HOUR TRIPS**  
 INBOUND: 62 VPH  
 OUTBOUND: 18 VPH

JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

ITE TRIP GENERATION SHEETS

LUC 154 – HIGH-CUBE TRANSLOAD &  
SHORT TERM STORAGE WAREHOUSE

*APPENDIX*

# High-Cube Transload and Short-Term Storage Warehouse (154)

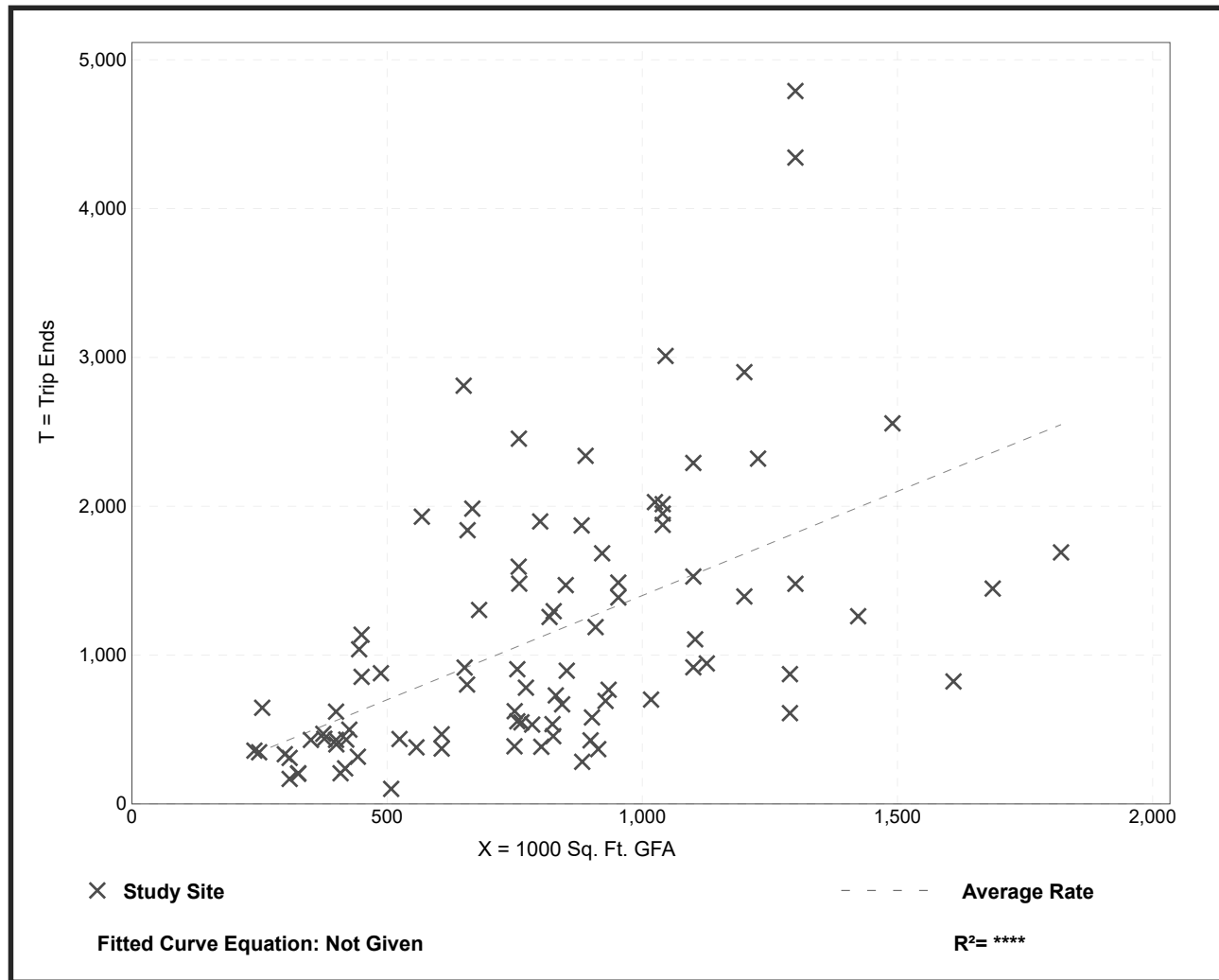
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday

Setting/Location: General Urban/Suburban  
 Number of Studies: 91  
 Avg. 1000 Sq. Ft. GFA: 798  
 Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.40         | 0.20 - 4.32    | 0.86               |

## Data Plot and Equation



Trip Generation Manual, 10th Edition • Institute of Transportation Engineers



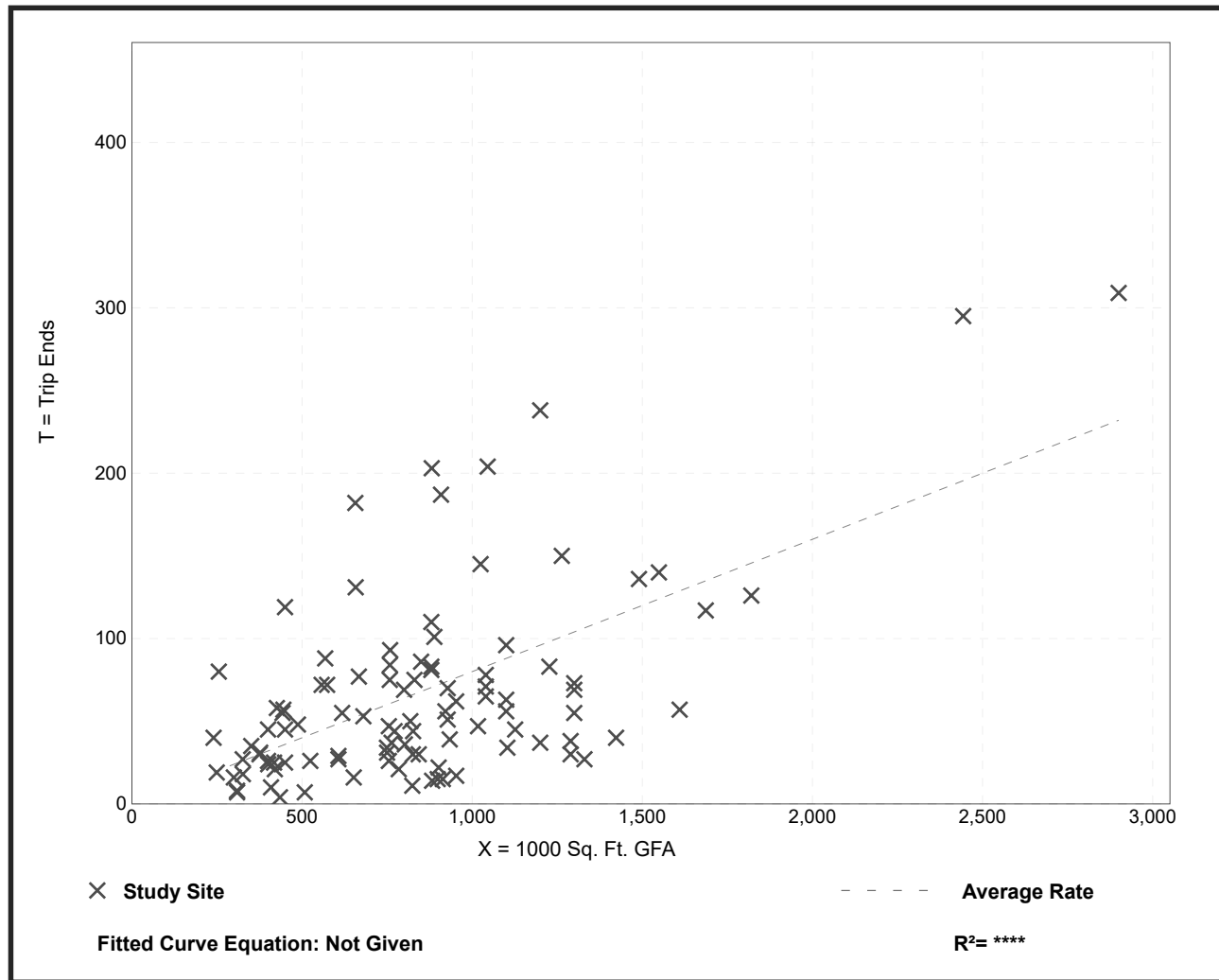
# High-Cube Transload and Short-Term Storage Warehouse (154)

**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**  
**Setting/Location: General Urban/Suburban**  
 Number of Studies: 102  
 Avg. 1000 Sq. Ft. GFA: 846  
 Directional Distribution: 77% entering, 23% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.08         | 0.01 - 0.31    | 0.05               |

## Data Plot and Equation



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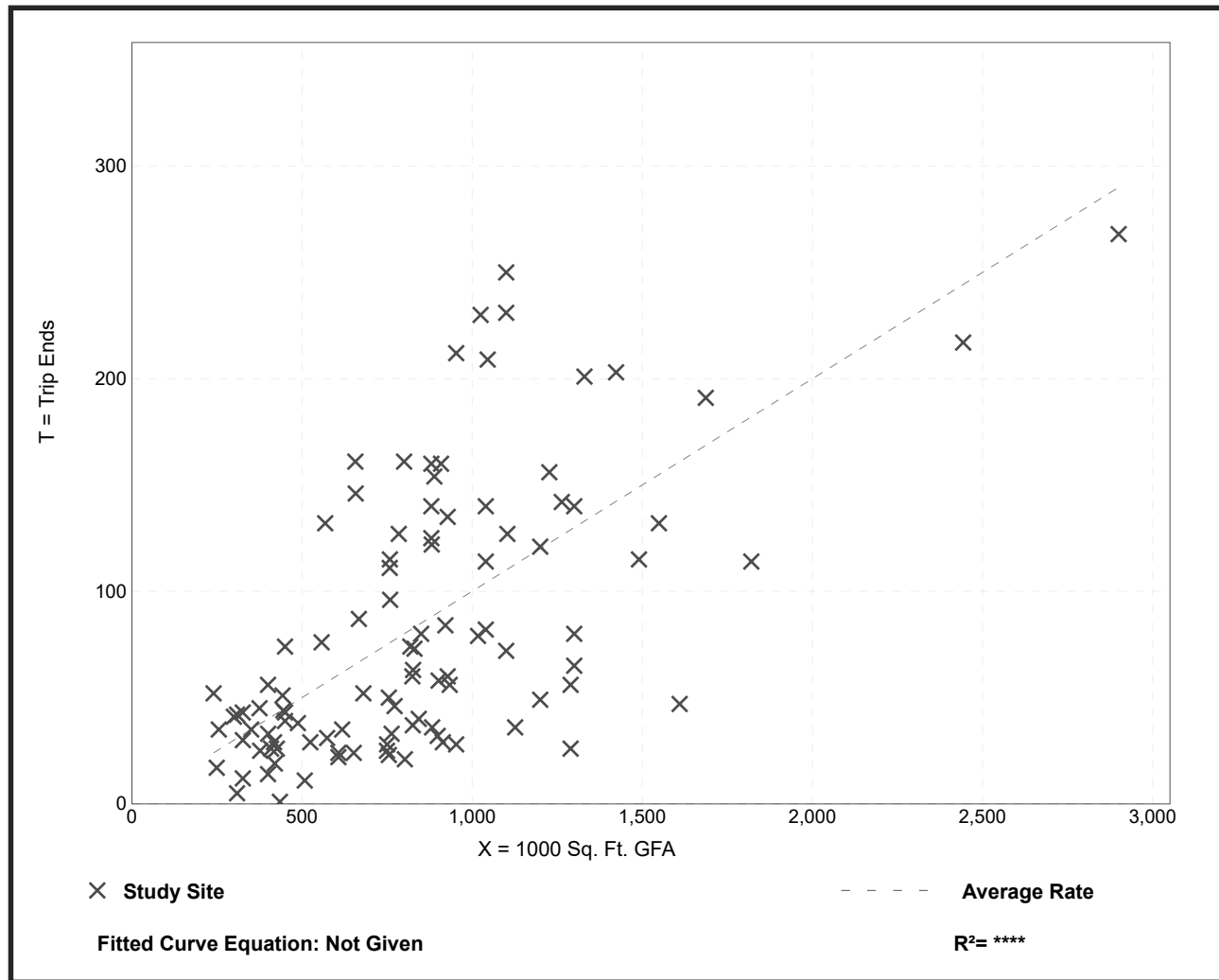
# High-Cube Transload and Short-Term Storage Warehouse (154)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 4 and 6 p.m.  
 Setting/Location: General Urban/Suburban  
 Number of Studies: 103  
 Avg. 1000 Sq. Ft. GFA: 840  
 Directional Distribution: 28% entering, 72% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.10         | 0.00 - 0.25    | 0.06               |

## Data Plot and Equation



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






















JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

LEVEL OF SERVICE

*APPENDIX*

Lanes, Volumes, Timings  
 7: I-5 NB Off-Ramp/I-5 NB On-Ramp & Labree Rd

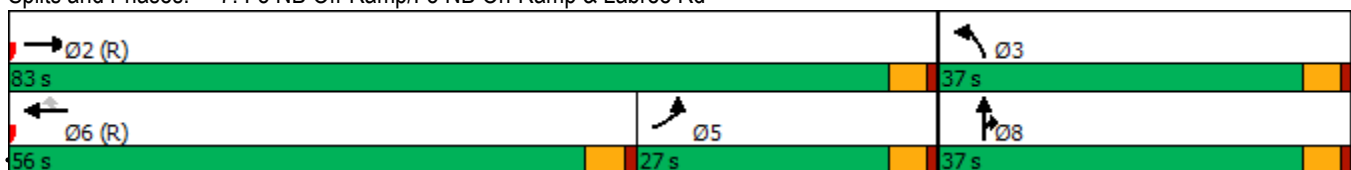
Baseline 2020 PM Peak Hour  
 12/04/2020

|                         |    |    |  |  |   |    |   |  |  |  |  |  |
|-------------------------|---|---|---|---|--|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |   |   |   |   |     |  |  |  |  |   |   |   |
| Traffic Volume (vph)    | 109   | 274   | 0   | 0   | 273  | 164   | 14  | 0   | 57  | 0   | 0   | 0   |
| Future Volume (vph)     | 109   | 274   | 0   | 0   | 273  | 164   | 14  | 0   | 57  | 0   | 0   | 0   |
| Satd. Flow (prot)       | 3400  | 3374  | 0   | 0   | 6052   | 1524  | 1491  | 1491  | 1302  | 0   | 0   | 0   |
| Flt Permitted           | 0.950   |   |   |   |  |   | 0.950   | 0.950   |   |   |   |   |
| Satd. Flow (perm)       | 3400  | 3374  | 0   | 0   | 6052   | 1524  | 1491  | 1491  | 1302  | 0   | 0   | 0   |
| Satd. Flow (RTOR)       |   |   |   |   |  | 186   |   |   | 65  |   |   |   |
| Lane Group Flow (vph)   | 124   | 311   | 0   | 0   | 310  | 186   | 8   | 8   | 65  | 0   | 0   | 0   |
| Turn Type               | Prot  | NA  |   |   | NA   | Perm  | Prot  | NA  | Prot  |   |   |   |
| Protected Phases        | 5   | 2   |   |   | 6  |   | 3   | 8   | 8   |   |   |   |
| Permitted Phases        |   |   |   |   |  | 6   |   |   |   |   |   |   |
| Total Split (s)         | 27.0  | 83.0  |   |   | 56.0   | 56.0  | 37.0  | 37.0  | 37.0  |   |   |   |
| Total Lost Time (s)     | 4.5   | 4.5   |   |   | 4.5  | 4.5   | 4.5   | 4.5   | 4.5   |   |   |   |
| Act Effct Green (s)     | 22.5  | 78.5  |   |   | 51.5   | 51.5  | 11.3  | 6.5   | 32.5  |   |   |   |
| Actuated g/C Ratio      | 0.19  | 0.65  |   |   | 0.43   | 0.43  | 0.09  | 0.05  | 0.27  |   |   |   |
| v/c Ratio               | 0.19  | 0.14  |   |   | 0.12   | 0.24  | 0.06  | 0.10  | 0.16  |   |   |   |
| Control Delay           | 33.6  | 6.9   |   |   | 20.8   | 3.8   | 43.3  | 35.0  | 9.0   |   |   |   |
| Queue Delay             | 0.0   | 0.0   |   |   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |   |   |   |
| Total Delay             | 33.6  | 6.9   |   |   | 20.8   | 3.8   | 43.3  | 35.0  | 9.0   |   |   |   |
| LOS                     | C   | A   |   |   | C  | A   | D   | C   | A   |   |   |   |
| Approach Delay          |   | 14.6  |   |   | 14.4   |   |   | 15.0  |   |   |   |   |
| Approach LOS            |   | B   |   |   | B  |   |   | B   |   |   |   |   |
| Queue Length 50th (ft)  | 27  | 32  |   |   | 41   | 0   | 6   | ~13   | 0   |   |   |   |
| Queue Length 95th (ft)  | 43  | 42  |   |   | 56   | 40  | 17  | 17  | 33  |   |   |   |
| Internal Link Dist (ft) |   | 228   |   |   | 1025   |   |   | 631   |   |   | 380   |   |
| Turn Bay Length (ft)    |   |   |   |   |  | 325   | 325   |   | 250   |   |   |   |
| Base Capacity (vph)     | 637   | 2207  |   |   | 2597   | 760   | 403   | 81  | 400   |   |   |   |
| Starvation Cap Reductn  | 0   | 0   |   |   | 0  | 0   | 0   | 0   | 0   |   |   |   |
| Spillback Cap Reductn   | 0   | 0   |   |   | 0  | 0   | 0   | 0   | 0   |   |   |   |
| Storage Cap Reductn     | 0   | 0   |   |   | 0  | 0   | 0   | 0   | 0   |   |   |   |
| Reduced v/c Ratio       | 0.19  | 0.14  |   |   | 0.12   | 0.24  | 0.02  | 0.10  | 0.16  |   |   |   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.24  
 Intersection Signal Delay: 14.5      Intersection LOS: B  
 Intersection Capacity Utilization 29.7%      ICU Level of Service A  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

Splits and Phases: 7: I-5 NB Off-Ramp/I-5 NB On-Ramp & Labree Rd



Lanes, Volumes, Timings

Synchro 10 Light Report  
 Page 1

Lanes, Volumes, Timings  
 8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd

Baseline 2020 PM Peak Hour  
 12/04/2020

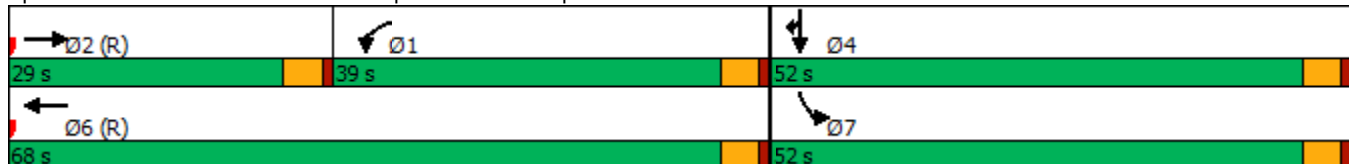


| Lane Group              | EBL | EBT  | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR  |
|-------------------------|-----|------|-----|-------|------|-----|-----|-----|-----|-------|-------|------|
| Lane Configurations     |     | ↑↑↑↑ |     | ↔↔    | ↑↑   |     |     |     |     | ↔     | ↔     | ↔    |
| Traffic Volume (vph)    | 0   | 98   | 11  | 203   | 84   | 0   | 0   | 0   | 0   | 276   | 2     | 40   |
| Future Volume (vph)     | 0   | 98   | 11  | 203   | 84   | 0   | 0   | 0   | 0   | 276   | 2     | 40   |
| Satd. Flow (prot)       | 0   | 6262 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Flt Permitted           |     |      |     | 0.950 |      |     |     |     |     | 0.950 | 0.953 |      |
| Satd. Flow (perm)       | 0   | 6262 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Satd. Flow (RTOR)       |     | 11   |     |       |      |     |     |     |     |       |       | 55   |
| Lane Group Flow (vph)   | 0   | 112  | 0   | 209   | 87   | 0   | 0   | 0   | 0   | 142   | 145   | 41   |
| Turn Type               |     | NA   |     | Prot  | NA   |     |     |     |     | Prot  | NA    | Prot |
| Protected Phases        |     | 2    |     | 1     | 6    |     |     |     |     | 7     | 4     | 4    |
| Permitted Phases        |     |      |     |       |      |     |     |     |     |       |       |      |
| Total Split (s)         |     | 29.0 |     | 39.0  | 68.0 |     |     |     |     | 52.0  | 52.0  | 52.0 |
| Total Lost Time (s)     |     | 4.5  |     | 4.5   | 4.5  |     |     |     |     | 4.5   | 4.5   | 4.5  |
| Act Effct Green (s)     |     | 24.5 |     | 34.5  | 63.5 |     |     |     |     | 47.5  | 47.5  | 47.5 |
| Actuated g/C Ratio      |     | 0.20 |     | 0.29  | 0.53 |     |     |     |     | 0.40  | 0.40  | 0.40 |
| v/c Ratio               |     | 0.09 |     | 0.23  | 0.05 |     |     |     |     | 0.22  | 0.23  | 0.07 |
| Control Delay           |     | 35.1 |     | 14.3  | 2.6  |     |     |     |     | 25.2  | 25.3  | 4.0  |
| Queue Delay             |     | 0.0  |     | 0.0   | 0.0  |     |     |     |     | 0.0   | 0.0   | 0.0  |
| Total Delay             |     | 35.1 |     | 14.3  | 2.6  |     |     |     |     | 25.2  | 25.3  | 4.0  |
| LOS                     |     | D    |     | B     | A    |     |     |     |     | C     | C     | A    |
| Approach Delay          |     | 35.1 |     |       | 10.8 |     |     |     |     |       | 22.6  |      |
| Approach LOS            |     | D    |     |       | B    |     |     |     |     |       | C     |      |
| Queue Length 50th (ft)  |     | 18   |     | 64    | 2    |     |     |     |     | 75    | 77    | 0    |
| Queue Length 95th (ft)  |     | 32   |     | 97    | 5    |     |     |     |     | 126   | 129   | 16   |
| Internal Link Dist (ft) |     | 635  |     |       | 228  |     |     | 826 |     |       | 449   |      |
| Turn Bay Length (ft)    |     |      |     |       |      |     |     |     |     |       |       |      |
| Base Capacity (vph)     |     | 1287 |     | 915   | 1854 |     |     |     |     | 634   | 636   | 609  |
| Starvation Cap Reductn  |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Spillback Cap Reductn   |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Storage Cap Reductn     |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Reduced v/c Ratio       |     | 0.09 |     | 0.23  | 0.05 |     |     |     |     | 0.22  | 0.23  | 0.07 |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 94 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.23  
 Intersection Signal Delay: 19.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 29.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd



| Intersection             |      |      |      |      |      |      |      |       |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Int Delay, s/veh         | 6.8  |      |      |      |      |      |      |       |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↻    |      |      | ↻    |      |      |       |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 287  | 139  | 92   | 274  | 0    | 0    | 0     | 0    | 100  | 1    | 318  |
| Future Vol, veh/h        | 0    | 287  | 139  | 92   | 274  | 0    | 0    | 0     | 0    | 100  | 1    | 318  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop  | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -     | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -     | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 16974 | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92    | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 1    | 11   | 22   | 16   | 13   | 1    | 2    | 2     | 2    | 13   | 1    | 11   |
| Mvmt Flow                | 0    | 312  | 151  | 100  | 298  | 0    | 0    | 0     | 0    | 109  | 1    | 346  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor2 |       |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|-------|
| Conflicting Flow All | -      | 0 | 0 | 463    | 0 | 0 |        | 886   | 961   | 298   |
| Stage 1              | -      | - | - | -      | - | - |        | 498   | 498   | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 388   | 463   | -     |
| Critical Hdwy        | -      | - | - | 4.26   | - | - |        | 6.53  | 6.51  | 6.31  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Follow-up Hdwy       | -      | - | - | 2.344  | - | - |        | 3.617 | 4.009 | 3.399 |
| Pot Cap-1 Maneuver   | 0      | - | - | 1029   | - | 0 |        | 301   | 257   | 721   |
| Stage 1              | 0      | - | - | -      | - | 0 |        | 589   | 546   | -     |
| Stage 2              | 0      | - | - | -      | - | 0 |        | 662   | 566   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - |        | -     | -     | -     |
| Mov Cap-1 Maneuver   | -      | - | - | 1029   | - | - |        | 266   | 0     | 721   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - |        | 266   | 0     | -     |
| Stage 1              | -      | - | - | -      | - | - |        | 589   | 0     | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 585   | 0     | -     |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.2 | 17.6 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | EBT | EBR | WBL   | WBT | SBLn1 | SBLn2 |
|-----------------------|-----|-----|-------|-----|-------|-------|
| Capacity (veh/h)      | -   | -   | 1029  | -   | 266   | 721   |
| HCM Lane V/C Ratio    | -   | -   | 0.097 | -   | 0.409 | 0.481 |
| HCM Control Delay (s) | -   | -   | 8.9   | 0   | 27.6  | 14.5  |
| HCM Lane LOS          | -   | -   | A     | A   | D     | B     |
| HCM 95th %tile Q(veh) | -   | -   | 0.3   | -   | 1.9   | 2.6   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |       |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Int Delay, s/veh         | 6.6  |      |      |      |      |      |      |      |      |      |       |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      | ↔    | ↔    |      |      |       |      |
| Traffic Vol, veh/h       | 180  | 212  | 0    | 0    | 259  | 122  | 106  | 0    | 114  | 0    | 0     | 0    |
| Future Vol, veh/h        | 180  | 212  | 0    | 0    | 259  | 122  | 106  | 0    | 114  | 0    | 0     | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop  | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -     | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -     | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 16965 | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    |
| Peak Hour Factor         | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98    | 98   |
| Heavy Vehicles, %        | 16   | 7    | 1    | 1    | 7    | 9    | 28   | 1    | 10   | 2    | 2     | 2    |
| Mvmt Flow                | 184  | 216  | 0    | 0    | 264  | 124  | 108  | 0    | 116  | 0    | 0     | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 388    | 0      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.26   | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.344  | -      | -      |
| Pot Cap-1 Maneuver   | 1098   | -      | 0      |
| Stage 1              | -      | -      | 0      |
| Stage 2              | -      | -      | 0      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1098   | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | WB | NB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 4.1 | 0  | 22.5 |
| HCM LOS              |     |    | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | WBT | WBR |
|-----------------------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 222   | 804   | 1098  | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.487 | 0.145 | 0.167 | -   | -   | -   |
| HCM Control Delay (s) | 35.7  | 10.2  | 8.9   | 0   | -   | -   |
| HCM Lane LOS          | E     | B     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 2.4   | 0.5   | 0.6   | -   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 189  | 134  | 116  | 35   | 50   | 259  |
| Future Vol, veh/h        | 189  | 134  | 116  | 35   | 50   | 259  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 50   | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 12   | 3    | 2    | 1    | 4    | 10   |
| Mvmt Flow                | 195  | 138  | 120  | 36   | 52   | 267  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 462    | 186    | 319    | 0 | - | 0 |
| Stage 1              | 186    | -      | -      | - | - | - |
| Stage 2              | 276    | -      | -      | - | - | - |
| Critical Hdwy        | 6.52   | 6.23   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.52   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.52   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.608  | 3.327  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 540    | 854    | 1241   | - | - | - |
| Stage 1              | 822    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 487    | 854    | 1241   | - | - | - |
| Mov Cap-2 Maneuver   | 487    | -      | -      | - | - | - |
| Stage 1              | 741    | -      | -      | - | - | - |
| Stage 2              | 748    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 14.2 | 6.3 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1241  | -   | 487   | 854   | -   | -   |
| HCM Lane V/C Ratio    | 0.096 | -   | 0.4   | 0.162 | -   | -   |
| HCM Control Delay (s) | 8.2   | 0   | 17.2  | 10    | -   | -   |
| HCM Lane LOS          | A     | A   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | 1.9   | 0.6   | -   | -   |



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 60   | 78   | 39   | 38   | 2    | 21   | 83   | 33   | 2    | 105  | 4    |
| Future Vol, veh/h        | 2    | 60   | 78   | 39   | 38   | 2    | 21   | 83   | 33   | 2    | 105  | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 1    | 4    | 7    | 3    | 1    | 1    | 5    | 5    | 3    | 1    | 1    | 1    |
| Mvmt Flow                | 2    | 63   | 82   | 41   | 40   | 2    | 22   | 87   | 35   | 2    | 111  | 4    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 287    | 283   | 113    | 339   | 268    | 105   | 115    | 0 | 0 | 122   | 0 | 0 |
| Stage 1              | 117    | 117   | -      | 149   | 149    | -     | -      | - | - | -     | - | - |
| Stage 2              | 170    | 166   | -      | 190   | 119    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.11   | 6.54  | 6.27   | 7.13  | 6.51   | 6.21  | 4.15   | - | - | 4.11  | - | - |
| Critical Hdwy Stg 1  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.509  | 4.036 | 3.363  | 3.527 | 4.009  | 3.309 | 2.245  | - | - | 2.209 | - | - |
| Pot Cap-1 Maneuver   | 667    | 623   | 926    | 613   | 640    | 952   | 1455   | - | - | 1472  | - | - |
| Stage 1              | 890    | 795   | -      | 851   | 776    | -     | -      | - | - | -     | - | - |
| Stage 2              | 834    | 757   | -      | 809   | 799    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 625    | 612   | 926    | 508   | 629    | 952   | 1455   | - | - | 1472  | - | - |
| Mov Cap-2 Maneuver   | 625    | 612   | -      | 508   | 629    | -     | -      | - | - | -     | - | - |
| Stage 1              | 876    | 794   | -      | 837   | 764    | -     | -      | - | - | -     | - | - |
| Stage 2              | 776    | 745   | -      | 678   | 798    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 10.9 | 12.4 | 1.2 | 0.1 |
| HCM LOS              | B    | B    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1455  | -   | -   | 755   | 567   | 1472  | -   | -   |
| HCM Lane V/C Ratio    | 0.015 | -   | -   | 0.195 | 0.147 | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.5   | 0   | -   | 10.9  | 12.4  | 7.4   | 0   | -   |
| HCM Lane LOS          | A     | A   | -   | B     | B     | A     | A   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.7   | 0.5   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.9  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | T    |      |      | T    |      |      |
| Traffic Vol, veh/h       | 121  | 28   | 33   | 58   | 81   | 69   |
| Future Vol, veh/h        | 121  | 28   | 33   | 58   | 81   | 69   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 3    | 1    | 10   | 2    | 1    | 6    |
| Mvmt Flow                | 132  | 30   | 36   | 63   | 88   | 75   |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 261    | 126    | 163    | 0 | - | 0 |
| Stage 1              | 126    | -      | -      | - | - | - |
| Stage 2              | 135    | -      | -      | - | - | - |
| Critical Hdwy        | 6.43   | 6.21   | 4.2    | - | - | - |
| Critical Hdwy Stg 1  | 5.43   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.43   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.527  | 3.309  | 2.29   | - | - | - |
| Pot Cap-1 Maneuver   | 726    | 927    | 1368   | - | - | - |
| Stage 1              | 897    | -      | -      | - | - | - |
| Stage 2              | 889    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 706    | 927    | 1368   | - | - | - |
| Mov Cap-2 Maneuver   | 706    | -      | -      | - | - | - |
| Stage 1              | 873    | -      | -      | - | - | - |
| Stage 2              | 889    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.2 | 2.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1368  | -   | 739   | -   | -   |
| HCM Lane V/C Ratio    | 0.026 | -   | 0.219 | -   | -   |
| HCM Control Delay (s) | 7.7   | 0   | 11.2  | -   | -   |
| HCM Lane LOS          | A     | A   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.8   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↗    |      | ↖    | ↖    | ↗    |
| Traffic Vol, veh/h       | 293  | 104  | 50   | 140  | 80   | 93   |
| Future Vol, veh/h        | 293  | 104  | 50   | 140  | 80   | 93   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 200  | -    | -    | 0    | 125  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 1    | 1    | 6    | 2    | 4    | 3    |
| Mvmt Flow                | 302  | 107  | 52   | 144  | 82   | 96   |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 409    | 0 | 550   |
| Stage 1              | -      | -      | -      | - | 302   |
| Stage 2              | -      | -      | -      | - | 248   |
| Critical Hdwy        | -      | -      | 4.16   | - | 6.44  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.44  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.44  |
| Follow-up Hdwy       | -      | -      | 2.254  | - | 3.536 |
| Pot Cap-1 Maneuver   | -      | -      | 1129   | - | 493   |
| Stage 1              | -      | -      | -      | - | 745   |
| Stage 2              | -      | -      | -      | - | 789   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1129   | - | 468   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 468   |
| Stage 1              | -      | -      | -      | - | 745   |
| Stage 2              | -      | -      | -      | - | 750   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.2 | 12.3 |
| HCM LOS              |    |     | B    |

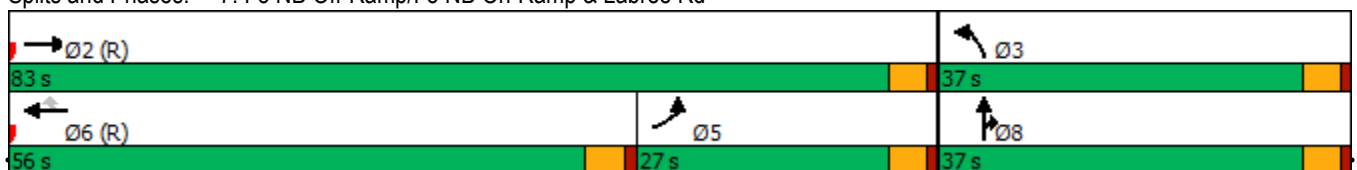
| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 468   | 735   | -   | -   | 1129  | -   |
| HCM Lane V/C Ratio    | 0.176 | 0.13  | -   | -   | 0.046 | -   |
| HCM Control Delay (s) | 14.3  | 10.6  | -   | -   | 8.3   | 0   |
| HCM Lane LOS          | B     | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.6   | 0.4   | -   | -   | 0.1   | -   |

| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR  | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|------|-------|-------|------|-----|-----|-----|
| Lane Configurations     |       |      |     |     |      |      |       |       |      |     |     |     |
| Traffic Volume (vph)    | 117   | 295  | 0   | 0   | 294  | 177  | 15    | 0     | 61   | 0   | 0   | 0   |
| Future Volume (vph)     | 117   | 295  | 0   | 0   | 294  | 177  | 15    | 0     | 61   | 0   | 0   | 0   |
| Satd. Flow (prot)       | 3400  | 3374 | 0   | 0   | 6052 | 1524 | 1491  | 1491  | 1302 | 0   | 0   | 0   |
| Flt Permitted           | 0.950 |      |     |     |      |      | 0.950 | 0.950 |      |     |     |     |
| Satd. Flow (perm)       | 3400  | 3374 | 0   | 0   | 6052 | 1524 | 1491  | 1491  | 1302 | 0   | 0   | 0   |
| Satd. Flow (RTOR)       |       |      |     |     |      | 201  |       |       | 69   |     |     |     |
| Lane Group Flow (vph)   | 133   | 335  | 0   | 0   | 334  | 201  | 8     | 9     | 69   | 0   | 0   | 0   |
| Turn Type               | Prot  | NA   |     |     | NA   | Perm | Prot  | NA    | Prot |     |     |     |
| Protected Phases        | 5     | 2    |     |     | 6    |      | 3     | 8     | 8    |     |     |     |
| Permitted Phases        |       |      |     |     |      | 6    |       |       |      |     |     |     |
| Total Split (s)         | 27.0  | 83.0 |     |     | 56.0 | 56.0 | 37.0  | 37.0  | 37.0 |     |     |     |
| Total Lost Time (s)     | 4.5   | 4.5  |     |     | 4.5  | 4.5  | 4.5   | 4.5   | 4.5  |     |     |     |
| Act Effct Green (s)     | 22.5  | 78.5 |     |     | 51.5 | 51.5 | 11.3  | 6.5   | 32.5 |     |     |     |
| Actuated g/C Ratio      | 0.19  | 0.65 |     |     | 0.43 | 0.43 | 0.09  | 0.05  | 0.27 |     |     |     |
| v/c Ratio               | 0.21  | 0.15 |     |     | 0.13 | 0.26 | 0.06  | 0.11  | 0.17 |     |     |     |
| Control Delay           | 34.0  | 7.1  |     |     | 20.9 | 3.8  | 43.3  | 35.4  | 8.8  |     |     |     |
| Queue Delay             | 0.0   | 0.0  |     |     | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  |     |     |     |
| Total Delay             | 34.0  | 7.1  |     |     | 20.9 | 3.8  | 43.3  | 35.4  | 8.8  |     |     |     |
| LOS                     | C     | A    |     |     | C    | A    | D     | D     | A    |     |     |     |
| Approach Delay          |       | 14.8 |     |     | 14.4 |      |       | 14.8  |      |     |     |     |
| Approach LOS            |       | B    |     |     | B    |      |       | B     |      |     |     |     |
| Queue Length 50th (ft)  | 28    | 34   |     |     | 44   | 0    | 6     | ~15   | 0    |     |     |     |
| Queue Length 95th (ft)  | 46    | 46   |     |     | 59   | 41   | 17    | 20    | 34   |     |     |     |
| Internal Link Dist (ft) |       | 228  |     |     | 1025 |      |       | 631   |      |     | 380 |     |
| Turn Bay Length (ft)    |       |      |     |     |      | 325  | 325   |       | 250  |     |     |     |
| Base Capacity (vph)     | 637   | 2207 |     |     | 2597 | 768  | 403   | 81    | 402  |     |     |     |
| Starvation Cap Reductn  | 0     | 0    |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Spillback Cap Reductn   | 0     | 0    |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Storage Cap Reductn     | 0     | 0    |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Reduced v/c Ratio       | 0.21  | 0.15 |     |     | 0.13 | 0.26 | 0.02  | 0.11  | 0.17 |     |     |     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.26  
 Intersection Signal Delay: 14.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 30.5%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

Splits and Phases: 7: I-5 NB Off-Ramp/I-5 NB On-Ramp & Labree Rd



Lanes, Volumes, Timings  
8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd

Forecast 2025 PM Peak Hour Without Project  
12/04/2020

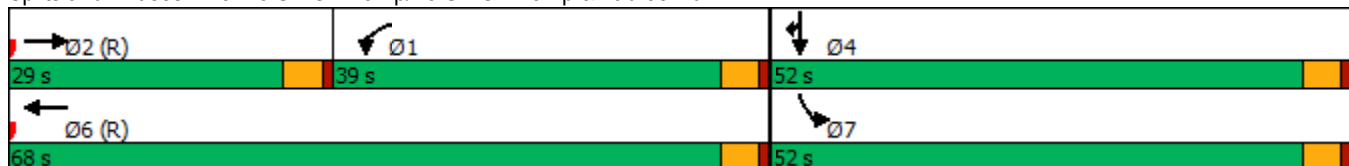


| Lane Group              | EBL | EBT  | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR  |
|-------------------------|-----|------|-----|-------|------|-----|-----|-----|-----|-------|-------|------|
| Lane Configurations     |     | ↑↑↑↑ |     | ↔↔    | ↑↑   |     |     |     |     | ↔     | ↔     | ↔    |
| Traffic Volume (vph)    | 0   | 106  | 12  | 219   | 90   | 0   | 0   | 0   | 0   | 297   | 2     | 43   |
| Future Volume (vph)     | 0   | 106  | 12  | 219   | 90   | 0   | 0   | 0   | 0   | 297   | 2     | 43   |
| Satd. Flow (prot)       | 0   | 6263 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Flt Permitted           |     |      |     | 0.950 |      |     |     |     |     | 0.950 | 0.953 |      |
| Satd. Flow (perm)       | 0   | 6263 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Satd. Flow (RTOR)       |     | 12   |     |       |      |     |     |     |     |       |       | 55   |
| Lane Group Flow (vph)   | 0   | 121  | 0   | 226   | 93   | 0   | 0   | 0   | 0   | 153   | 155   | 44   |
| Turn Type               |     | NA   |     | Prot  | NA   |     |     |     |     | Prot  | NA    | Prot |
| Protected Phases        |     | 2    |     | 1     | 6    |     |     |     |     | 7     | 4     | 4    |
| Permitted Phases        |     |      |     |       |      |     |     |     |     |       |       |      |
| Total Split (s)         |     | 29.0 |     | 39.0  | 68.0 |     |     |     |     | 52.0  | 52.0  | 52.0 |
| Total Lost Time (s)     |     | 4.5  |     | 4.5   | 4.5  |     |     |     |     | 4.5   | 4.5   | 4.5  |
| Act Effct Green (s)     |     | 24.5 |     | 34.5  | 63.5 |     |     |     |     | 47.5  | 47.5  | 47.5 |
| Actuated g/C Ratio      |     | 0.20 |     | 0.29  | 0.53 |     |     |     |     | 0.40  | 0.40  | 0.40 |
| v/c Ratio               |     | 0.09 |     | 0.25  | 0.05 |     |     |     |     | 0.24  | 0.24  | 0.07 |
| Control Delay           |     | 35.1 |     | 14.4  | 2.6  |     |     |     |     | 25.5  | 25.6  | 4.7  |
| Queue Delay             |     | 0.0  |     | 0.0   | 0.0  |     |     |     |     | 0.0   | 0.0   | 0.0  |
| Total Delay             |     | 35.1 |     | 14.4  | 2.6  |     |     |     |     | 25.5  | 25.6  | 4.7  |
| LOS                     |     | D    |     | B     | A    |     |     |     |     | C     | C     | A    |
| Approach Delay          |     | 35.1 |     |       | 11.0 |     |     |     |     |       | 22.9  |      |
| Approach LOS            |     | D    |     |       | B    |     |     |     |     |       | C     |      |
| Queue Length 50th (ft)  |     | 20   |     | 70    | 2    |     |     |     |     | 82    | 83    | 0    |
| Queue Length 95th (ft)  |     | 34   |     | 104   | 5    |     |     |     |     | 135   | 136   | 19   |
| Internal Link Dist (ft) |     | 635  |     |       | 228  |     |     | 826 |     |       | 449   |      |
| Turn Bay Length (ft)    |     |      |     |       |      |     |     |     |     |       |       |      |
| Base Capacity (vph)     |     | 1288 |     | 915   | 1854 |     |     |     |     | 634   | 636   | 609  |
| Starvation Cap Reductn  |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Spillback Cap Reductn   |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Storage Cap Reductn     |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Reduced v/c Ratio       |     | 0.09 |     | 0.25  | 0.05 |     |     |     |     | 0.24  | 0.24  | 0.07 |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 94 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.25  
 Intersection Signal Delay: 20.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 30.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd



| Intersection             |      |      |      |      |      |      |      |       |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Int Delay, s/veh         | 7.7  |      |      |      |      |      |      |       |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↻    |      |      | ↻    |      |      |       |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 309  | 150  | 99   | 295  | 0    | 0    | 0     | 0    | 108  | 1    | 343  |
| Future Vol, veh/h        | 0    | 309  | 150  | 99   | 295  | 0    | 0    | 0     | 0    | 108  | 1    | 343  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop  | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -     | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -     | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 16974 | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92    | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 1    | 11   | 22   | 16   | 13   | 1    | 2    | 2     | 2    | 13   | 1    | 11   |
| Mvmt Flow                | 0    | 336  | 163  | 108  | 321  | 0    | 0    | 0     | 0    | 117  | 1    | 373  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor2 |       |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|-------|
| Conflicting Flow All | -      | 0 | 0 | 499    | 0 | 0 |        | 955   | 1036  | 321   |
| Stage 1              | -      | - | - | -      | - | - |        | 537   | 537   | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 418   | 499   | -     |
| Critical Hdwy        | -      | - | - | 4.26   | - | - |        | 6.53  | 6.51  | 6.31  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Follow-up Hdwy       | -      | - | - | 2.344  | - | - |        | 3.617 | 4.009 | 3.399 |
| Pot Cap-1 Maneuver   | 0      | - | - | 997    | - | 0 |        | 274   | 232   | 699   |
| Stage 1              | 0      | - | - | -      | - | 0 |        | 564   | 524   | -     |
| Stage 2              | 0      | - | - | -      | - | 0 |        | 641   | 545   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - |        | -     | -     | -     |
| Mov Cap-1 Maneuver   | -      | - | - | 997    | - | - |        | 238   | 0     | 699   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - |        | 238   | 0     | -     |
| Stage 1              | -      | - | - | -      | - | - |        | 564   | 0     | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 556   | 0     | -     |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.3 | 20.2 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | EBT | EBR | WBL   | WBT | SBLn1 | SBLn2 |
|-----------------------|-----|-----|-------|-----|-------|-------|
| Capacity (veh/h)      | -   | -   | 997   | -   | 238   | 699   |
| HCM Lane V/C Ratio    | -   | -   | 0.108 | -   | 0.493 | 0.535 |
| HCM Control Delay (s) | -   | -   | 9     | 0   | 34    | 15.9  |
| HCM Lane LOS          | -   | -   | A     | A   | D     | C     |
| HCM 95th %tile Q(veh) | -   | -   | 0.4   | -   | 2.5   | 3.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |       |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Int Delay, s/veh         | 7.9  |      |      |      |      |      |      |      |      |      |       |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      | ↔    | ↔    |      |      |       |      |
| Traffic Vol, veh/h       | 194  | 228  | 0    | 0    | 279  | 131  | 114  | 0    | 123  | 0    | 0     | 0    |
| Future Vol, veh/h        | 194  | 228  | 0    | 0    | 279  | 131  | 114  | 0    | 123  | 0    | 0     | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop  | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -     | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -     | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 16965 | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    |
| Peak Hour Factor         | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98    | 98   |
| Heavy Vehicles, %        | 16   | 7    | 1    | 1    | 7    | 9    | 28   | 1    | 10   | 2    | 2     | 2    |
| Mvmt Flow                | 198  | 233  | 0    | 0    | 285  | 134  | 116  | 0    | 126  | 0    | 0     | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 419    | 0      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | 4.26   | -      | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | 2.344  | -      | -      |
| Pot Cap-1 Maneuver   | 1069   | 0      | 0      |
| Stage 1              | -      | 0      | 0      |
| Stage 2              | -      | 0      | 0      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1069   | -      | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | EB  | WB | NB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 4.2 | 0  | 28.3 |
| HCM LOS              |     |    | D    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | WBT | WBR |
|-----------------------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 195   | 787   | 1069  | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.597 | 0.159 | 0.185 | -   | -   | -   |
| HCM Control Delay (s) | 47.6  | 10.4  | 9.1   | 0   | -   | -   |
| HCM Lane LOS          | E     | B     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 3.3   | 0.6   | 0.7   | -   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.6  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 204  | 144  | 125  | 38   | 54   | 279  |
| Future Vol, veh/h        | 204  | 144  | 125  | 38   | 54   | 279  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 50   | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 12   | 3    | 2    | 1    | 4    | 10   |
| Mvmt Flow                | 210  | 148  | 129  | 39   | 56   | 288  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 497    | 200    | 344    | 0 | - | 0 |
| Stage 1              | 200    | -      | -      | - | - | - |
| Stage 2              | 297    | -      | -      | - | - | - |
| Critical Hdwy        | 6.52   | 6.23   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.52   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.52   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.608  | 3.327  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 515    | 838    | 1215   | - | - | - |
| Stage 1              | 810    | -      | -      | - | - | - |
| Stage 2              | 732    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 459    | 838    | 1215   | - | - | - |
| Mov Cap-2 Maneuver   | 459    | -      | -      | - | - | - |
| Stage 1              | 722    | -      | -      | - | - | - |
| Stage 2              | 732    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.5 | 6.4 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1215  | -   | 459   | 838   | -   | -   |
| HCM Lane V/C Ratio    | 0.106 | -   | 0.458 | 0.177 | -   | -   |
| HCM Control Delay (s) | 8.3   | 0   | 19.3  | 10.2  | -   | -   |
| HCM Lane LOS          | A     | A   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.4   | 0.6   | -   | -   |



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 65   | 84   | 42   | 41   | 2    | 23   | 89   | 36   | 2    | 113  | 5    |
| Future Vol, veh/h        | 2    | 65   | 84   | 42   | 41   | 2    | 23   | 89   | 36   | 2    | 113  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 1    | 4    | 7    | 3    | 1    | 1    | 5    | 5    | 3    | 1    | 1    | 1    |
| Mvmt Flow                | 2    | 68   | 88   | 44   | 43   | 2    | 24   | 94   | 38   | 2    | 119  | 5    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 310    | 306   | 122    | 365   | 289    | 113   | 124    | 0 | 0 | 132   | 0 | 0 |
| Stage 1              | 126    | 126   | -      | 161   | 161    | -     | -      | - | - | -     | - | - |
| Stage 2              | 184    | 180   | -      | 204   | 128    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.11   | 6.54  | 6.27   | 7.13  | 6.51   | 6.21  | 4.15   | - | - | 4.11  | - | - |
| Critical Hdwy Stg 1  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.509  | 4.036 | 3.363  | 3.527 | 4.009  | 3.309 | 2.245  | - | - | 2.209 | - | - |
| Pot Cap-1 Maneuver   | 644    | 604   | 916    | 589   | 623    | 943   | 1444   | - | - | 1459  | - | - |
| Stage 1              | 880    | 788   | -      | 839   | 767    | -     | -      | - | - | -     | - | - |
| Stage 2              | 820    | 747   | -      | 796   | 792    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 599    | 593   | 916    | 478   | 611    | 943   | 1444   | - | - | 1459  | - | - |
| Mov Cap-2 Maneuver   | 599    | 593   | -      | 478   | 611    | -     | -      | - | - | -     | - | - |
| Stage 1              | 864    | 787   | -      | 824   | 753    | -     | -      | - | - | -     | - | - |
| Stage 2              | 757    | 734   | -      | 656   | 791    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB | NB  | SB  |
|----------------------|------|----|-----|-----|
| HCM Control Delay, s | 11.2 | 13 | 1.2 | 0.1 |
| HCM LOS              | B    | B  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1444  | -   | -   | 738        | 541   | 1459  | -   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | 0.215      | 0.165 | 0.001 | -   |
| HCM Control Delay (s) | 7.5   | 0   | -   | 11.2       | 13    | 7.5   | 0   |
| HCM Lane LOS          | A     | A   | -   | B          | B     | A     | A   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.8        | 0.6   | 0     | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      | T    |      | T    |      | T    |      |
| Traffic Vol, veh/h       | 130  | 30   | 36   | 62   | 87   | 74   |
| Future Vol, veh/h        | 130  | 30   | 36   | 62   | 87   | 74   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 3    | 1    | 10   | 2    | 1    | 6    |
| Mvmt Flow                | 141  | 33   | 39   | 67   | 95   | 80   |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 280    | 135    | 175  | 0      | 0 |
| Stage 1              | 135    | -      | -    | -      | - |
| Stage 2              | 145    | -      | -    | -      | - |
| Critical Hdwy        | 6.43   | 6.21   | 4.2  | -      | - |
| Critical Hdwy Stg 1  | 5.43   | -      | -    | -      | - |
| Critical Hdwy Stg 2  | 5.43   | -      | -    | -      | - |
| Follow-up Hdwy       | 3.527  | 3.309  | 2.29 | -      | - |
| Pot Cap-1 Maneuver   | 708    | 917    | 1354 | -      | - |
| Stage 1              | 889    | -      | -    | -      | - |
| Stage 2              | 880    | -      | -    | -      | - |
| Platoon blocked, %   |        |        |      | -      | - |
| Mov Cap-1 Maneuver   | 687    | 917    | 1354 | -      | - |
| Mov Cap-2 Maneuver   | 687    | -      | -    | -      | - |
| Stage 1              | 862    | -      | -    | -      | - |
| Stage 2              | 880    | -      | -    | -      | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 11.6 | 2.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1354  | -   | 721   | -   | -   |
| HCM Lane V/C Ratio    | 0.029 | -   | 0.241 | -   | -   |
| HCM Control Delay (s) | 7.7   | 0   | 11.6  | -   | -   |
| HCM Lane LOS          | A     | A   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | 0.9   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 316  | 112  | 54   | 151  | 86   | 100  |
| Future Vol, veh/h        | 316  | 112  | 54   | 151  | 86   | 100  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 200  | -    | -    | 0    | 125  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 1    | 1    | 6    | 2    | 4    | 3    |
| Mvmt Flow                | 326  | 115  | 56   | 156  | 89   | 103  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |       |
|----------------------|--------|--------|--------|---|-------|-------|
| Conflicting Flow All | 0      | 0      | 441    | 0 | 594   | 326   |
| Stage 1              | -      | -      | -      | - | 326   | -     |
| Stage 2              | -      | -      | -      | - | 268   | -     |
| Critical Hdwy        | -      | -      | 4.16   | - | 6.44  | 6.23  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.44  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.44  | -     |
| Follow-up Hdwy       | -      | -      | 2.254  | - | 3.536 | 3.327 |
| Pot Cap-1 Maneuver   | -      | -      | 1098   | - | 464   | 713   |
| Stage 1              | -      | -      | -      | - | 727   | -     |
| Stage 2              | -      | -      | -      | - | 772   | -     |
| Platoon blocked, %   | -      | -      | -      | - | -     | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1098   | - | 438   | 713   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 438   | -     |
| Stage 1              | -      | -      | -      | - | 727   | -     |
| Stage 2              | -      | -      | -      | - | 729   | -     |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.2 | 12.9 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 438   | 713   | -   | -   | 1098  | -   |
| HCM Lane V/C Ratio    | 0.202 | 0.145 | -   | -   | 0.051 | -   |
| HCM Control Delay (s) | 15.3  | 10.9  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | C     | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.7   | 0.5   | -   | -   | 0.2   | -   |

Lanes, Volumes, Timings  
 7: I-5 NB Off-Ramp/I-5 NB On-Ramp & Labree Rd

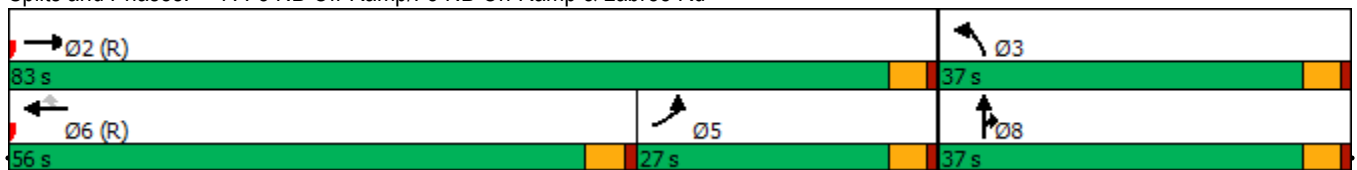
Forecast 2025 PM Peak Hour With Project  
 12/04/2020

| Lane Group              | EBL   | EBT  | EBR | WBL | WBT  | WBR  | NBL   | NBT   | NBR  | SBL | SBT | SBR |
|-------------------------|-------|------|-----|-----|------|------|-------|-------|------|-----|-----|-----|
| Lane Configurations     |       |      |     |     |      |      |       |       |      |     |     |     |
| Traffic Volume (vph)    | 117   | 308  | 0   | 0   | 298  | 209  | 15    | 0     | 63   | 0   | 0   | 0   |
| Future Volume (vph)     | 117   | 308  | 0   | 0   | 298  | 209  | 15    | 0     | 63   | 0   | 0   | 0   |
| Satd. Flow (prot)       | 3400  | 3374 | 0   | 0   | 6052 | 1524 | 1491  | 1491  | 1302 | 0   | 0   | 0   |
| Flt Permitted           | 0.950 |      |     |     |      |      | 0.950 | 0.950 |      |     |     |     |
| Satd. Flow (perm)       | 3400  | 3374 | 0   | 0   | 6052 | 1524 | 1491  | 1491  | 1302 | 0   | 0   | 0   |
| Satd. Flow (RTOR)       |       |      |     |     |      | 238  |       |       | 72   |     |     |     |
| Lane Group Flow (vph)   | 133   | 350  | 0   | 0   | 339  | 238  | 8     | 9     | 72   | 0   | 0   | 0   |
| Turn Type               | Prot  | NA   |     |     | NA   | Perm | Prot  | NA    | Prot |     |     |     |
| Protected Phases        | 5     | 2    |     |     | 6    |      | 3     | 8     | 8    |     |     |     |
| Permitted Phases        |       |      |     |     |      | 6    |       |       |      |     |     |     |
| Total Split (s)         | 27.0  | 83.0 |     |     | 56.0 | 56.0 | 37.0  | 37.0  | 37.0 |     |     |     |
| Total Lost Time (s)     | 4.5   | 4.5  |     |     | 4.5  | 4.5  | 4.5   | 4.5   | 4.5  |     |     |     |
| Act Effct Green (s)     | 22.5  | 78.5 |     |     | 51.5 | 51.5 | 11.3  | 6.5   | 32.5 |     |     |     |
| Actuated g/C Ratio      | 0.19  | 0.65 |     |     | 0.43 | 0.43 | 0.09  | 0.05  | 0.27 |     |     |     |
| v/c Ratio               | 0.21  | 0.16 |     |     | 0.13 | 0.30 | 0.06  | 0.11  | 0.18 |     |     |     |
| Control Delay           | 34.2  | 7.4  |     |     | 20.9 | 3.7  | 43.3  | 35.4  | 8.7  |     |     |     |
| Queue Delay             | 0.0   | 0.7  |     |     | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  |     |     |     |
| Total Delay             | 34.2  | 8.2  |     |     | 20.9 | 3.7  | 43.3  | 35.4  | 8.7  |     |     |     |
| LOS                     | C     | A    |     |     | C    | A    | D     | D     | A    |     |     |     |
| Approach Delay          |       | 15.3 |     |     | 13.8 |      |       | 14.5  |      |     |     |     |
| Approach LOS            |       | B    |     |     | B    |      |       | B     |      |     |     |     |
| Queue Length 50th (ft)  | 28    | 36   |     |     | 45   | 0    | 6     | ~15   | 0    |     |     |     |
| Queue Length 95th (ft)  | 47    | 87   |     |     | 60   | 44   | 17    | 20    | 34   |     |     |     |
| Internal Link Dist (ft) |       | 228  |     |     | 1025 |      |       | 631   |      |     | 380 |     |
| Turn Bay Length (ft)    |       |      |     |     |      | 325  | 325   |       | 250  |     |     |     |
| Base Capacity (vph)     | 637   | 2207 |     |     | 2597 | 789  | 403   | 81    | 405  |     |     |     |
| Starvation Cap Reductn  | 0     | 1507 |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Spillback Cap Reductn   | 0     | 0    |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Storage Cap Reductn     | 0     | 0    |     |     | 0    | 0    | 0     | 0     | 0    |     |     |     |
| Reduced v/c Ratio       | 0.21  | 0.50 |     |     | 0.13 | 0.30 | 0.02  | 0.11  | 0.18 |     |     |     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.30  
 Intersection Signal Delay: 14.6      Intersection LOS: B  
 Intersection Capacity Utilization 32.5%      ICU Level of Service A  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

Splits and Phases: 7: I-5 NB Off-Ramp/I-5 NB On-Ramp & Labree Rd



Lanes, Volumes, Timings

Lanes, Volumes, Timings  
 8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd

Forecast 2025 PM Peak Hour With Project  
 12/04/2020

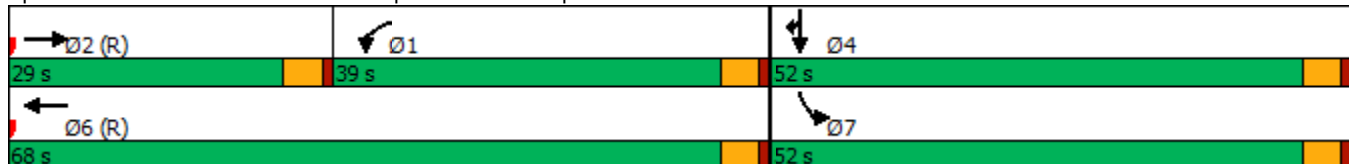


| Lane Group              | EBL | EBT  | EBR | WBL   | WBT  | WBR | NBL | NBT | NBR | SBL   | SBT   | SBR  |
|-------------------------|-----|------|-----|-------|------|-----|-----|-----|-----|-------|-------|------|
| Lane Configurations     |     | ↑↑↑↑ |     | ↔↔    | ↑↑   |     |     |     |     | ↔     | ↔     | ↔    |
| Traffic Volume (vph)    | 0   | 106  | 12  | 223   | 90   | 0   | 0   | 0   | 0   | 310   | 2     | 43   |
| Future Volume (vph)     | 0   | 106  | 12  | 223   | 90   | 0   | 0   | 0   | 0   | 310   | 2     | 43   |
| Satd. Flow (prot)       | 0   | 6263 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Flt Permitted           |     |      |     | 0.950 |      |     |     |     |     | 0.950 | 0.953 |      |
| Satd. Flow (perm)       | 0   | 6263 | 0   | 3183  | 3505 | 0   | 0   | 0   | 0   | 1603  | 1609  | 1455 |
| Satd. Flow (RTOR)       |     | 12   |     |       |      |     |     |     |     |       |       | 55   |
| Lane Group Flow (vph)   | 0   | 121  | 0   | 230   | 93   | 0   | 0   | 0   | 0   | 160   | 162   | 44   |
| Turn Type               |     | NA   |     | Prot  | NA   |     |     |     |     | Prot  | NA    | Prot |
| Protected Phases        |     | 2    |     | 1     | 6    |     |     |     |     | 7     | 4     | 4    |
| Permitted Phases        |     |      |     |       |      |     |     |     |     |       |       |      |
| Total Split (s)         |     | 29.0 |     | 39.0  | 68.0 |     |     |     |     | 52.0  | 52.0  | 52.0 |
| Total Lost Time (s)     |     | 4.5  |     | 4.5   | 4.5  |     |     |     |     | 4.5   | 4.5   | 4.5  |
| Act Effct Green (s)     |     | 24.5 |     | 34.5  | 63.5 |     |     |     |     | 47.5  | 47.5  | 47.5 |
| Actuated g/C Ratio      |     | 0.20 |     | 0.29  | 0.53 |     |     |     |     | 0.40  | 0.40  | 0.40 |
| v/c Ratio               |     | 0.09 |     | 0.25  | 0.05 |     |     |     |     | 0.25  | 0.25  | 0.07 |
| Control Delay           |     | 35.1 |     | 14.4  | 2.6  |     |     |     |     | 25.7  | 25.7  | 4.7  |
| Queue Delay             |     | 0.0  |     | 0.0   | 0.0  |     |     |     |     | 0.0   | 0.0   | 0.0  |
| Total Delay             |     | 35.1 |     | 14.4  | 2.6  |     |     |     |     | 25.7  | 25.7  | 4.7  |
| LOS                     |     | D    |     | B     | A    |     |     |     |     | C     | C     | A    |
| Approach Delay          |     | 35.1 |     |       | 11.0 |     |     |     |     |       | 23.2  |      |
| Approach LOS            |     | D    |     |       | B    |     |     |     |     |       | C     |      |
| Queue Length 50th (ft)  |     | 20   |     | 71    | 2    |     |     |     |     | 86    | 87    | 0    |
| Queue Length 95th (ft)  |     | 34   |     | 106   | 5    |     |     |     |     | 142   | 143   | 19   |
| Internal Link Dist (ft) |     | 635  |     |       | 228  |     |     | 826 |     |       | 449   |      |
| Turn Bay Length (ft)    |     |      |     |       |      |     |     |     |     |       |       |      |
| Base Capacity (vph)     |     | 1288 |     | 915   | 1854 |     |     |     |     | 634   | 636   | 609  |
| Starvation Cap Reductn  |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Spillback Cap Reductn   |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Storage Cap Reductn     |     | 0    |     | 0     | 0    |     |     |     |     | 0     | 0     | 0    |
| Reduced v/c Ratio       |     | 0.09 |     | 0.25  | 0.05 |     |     |     |     | 0.25  | 0.25  | 0.07 |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 94 (78%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.25  
 Intersection Signal Delay: 20.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 32.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 8: I-5 SB On-Ramp/I-5 SB Off-Ramp & Labree Rd



| Intersection             |      |      |      |      |      |      |      |       |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Int Delay, s/veh         | 7.9  |      |      |      |      |      |      |       |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↻    |      |      | ↻    |      |      |       |      | ↻    | ↻    |      |
| Traffic Vol, veh/h       | 0    | 309  | 150  | 110  | 295  | 0    | 0    | 0     | 0    | 108  | 1    | 343  |
| Future Vol, veh/h        | 0    | 309  | 150  | 110  | 295  | 0    | 0    | 0     | 0    | 108  | 1    | 343  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop  | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -     | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -     | -    | 50   | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 16974 | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92    | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 1    | 11   | 22   | 16   | 13   | 1    | 2    | 2     | 2    | 13   | 1    | 11   |
| Mvmt Flow                | 0    | 336  | 163  | 120  | 321  | 0    | 0    | 0     | 0    | 117  | 1    | 373  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor2 |       |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|-------|
| Conflicting Flow All | -      | 0 | 0 | 499    | 0 | 0 |        | 979   | 1060  | 321   |
| Stage 1              | -      | - | - | -      | - | - |        | 561   | 561   | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 418   | 499   | -     |
| Critical Hdwy        | -      | - | - | 4.26   | - | - |        | 6.53  | 6.51  | 6.31  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - |        | 5.53  | 5.51  | -     |
| Follow-up Hdwy       | -      | - | - | 2.344  | - | - |        | 3.617 | 4.009 | 3.399 |
| Pot Cap-1 Maneuver   | 0      | - | - | 997    | - | 0 |        | 265   | 225   | 699   |
| Stage 1              | 0      | - | - | -      | - | 0 |        | 550   | 512   | -     |
| Stage 2              | 0      | - | - | -      | - | 0 |        | 641   | 545   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - |        | -     | -     | -     |
| Mov Cap-1 Maneuver   | -      | - | - | 997    | - | - |        | 226   | 0     | 699   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - |        | 226   | 0     | -     |
| Stage 1              | -      | - | - | -      | - | - |        | 550   | 0     | -     |
| Stage 2              | -      | - | - | -      | - | - |        | 547   | 0     | -     |

| Approach             | EB | WB  | SB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 2.5 | 20.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | EBT | EBR | WBL  | WBT | SBLn1 | SBLn2 |
|-----------------------|-----|-----|------|-----|-------|-------|
| Capacity (veh/h)      | -   | -   | 997  | -   | 226   | 699   |
| HCM Lane V/C Ratio    | -   | -   | 0.12 | -   | 0.519 | 0.535 |
| HCM Control Delay (s) | -   | -   | 9.1  | 0   | 37    | 15.9  |
| HCM Lane LOS          | -   | -   | A    | A   | E     | C     |
| HCM 95th %tile Q(veh) | -   | -   | 0.4  | -   | 2.7   | 3.2   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |       |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Int Delay, s/veh         | 8    |      |      |      |      |      |      |      |      |      |       |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    |      | ↔    | ↔    |      |      |       |      |
| Traffic Vol, veh/h       | 194  | 228  | 0    | 0    | 290  | 131  | 114  | 0    | 127  | 0    | 0     | 0    |
| Future Vol, veh/h        | 194  | 228  | 0    | 0    | 290  | 131  | 114  | 0    | 127  | 0    | 0     | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop  | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -     | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -     | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 16965 | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    |
| Peak Hour Factor         | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98   | 98    | 98   |
| Heavy Vehicles, %        | 16   | 7    | 1    | 1    | 7    | 9    | 28   | 1    | 10   | 2    | 2     | 2    |
| Mvmt Flow                | 198  | 233  | 0    | 0    | 296  | 134  | 116  | 0    | 130  | 0    | 0     | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 430    | 0      | 0      |
| Stage 1              | -      | -      | 629    |
| Stage 2              | -      | -      | 363    |
| Critical Hdwy        | 4.26   | -      | 6.68   |
| Critical Hdwy Stg 1  | -      | -      | 5.68   |
| Critical Hdwy Stg 2  | -      | -      | 5.68   |
| Follow-up Hdwy       | 2.344  | -      | 3.752  |
| Pot Cap-1 Maneuver   | 1059   | 0      | 244    |
| Stage 1              | -      | 0      | 485    |
| Stage 2              | -      | 0      | 650    |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1059   | -      | 192    |
| Mov Cap-2 Maneuver   | -      | -      | 192    |
| Stage 1              | -      | -      | 381    |
| Stage 2              | -      | -      | 650    |

| Approach             | EB  | WB | NB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 4.2 | 0  | 28.7 |
| HCM LOS              |     |    | D    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL   | EBT | WBT | WBR |
|-----------------------|-------|-------|-------|-----|-----|-----|
| Capacity (veh/h)      | 192   | 787   | 1059  | -   | -   | -   |
| HCM Lane V/C Ratio    | 0.606 | 0.165 | 0.187 | -   | -   | -   |
| HCM Control Delay (s) | 49    | 10.5  | 9.2   | 0   | -   | -   |
| HCM Lane LOS          | E     | B     | A     | A   | -   | -   |
| HCM 95th %tile Q(veh) | 3.4   | 0.6   | 0.7   | -   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.7  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 208  | 144  | 125  | 38   | 54   | 290  |
| Future Vol, veh/h        | 208  | 144  | 125  | 38   | 54   | 290  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | 50   | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 12   | 3    | 2    | 1    | 4    | 10   |
| Mvmt Flow                | 214  | 148  | 129  | 39   | 56   | 299  |

| Major/Minor          | Minor2 | Major1 | Major2 |   |   |   |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 503    | 206    | 355    | 0 | - | 0 |
| Stage 1              | 206    | -      | -      | - | - | - |
| Stage 2              | 297    | -      | -      | - | - | - |
| Critical Hdwy        | 6.52   | 6.23   | 4.12   | - | - | - |
| Critical Hdwy Stg 1  | 5.52   | -      | -      | - | - | - |
| Critical Hdwy Stg 2  | 5.52   | -      | -      | - | - | - |
| Follow-up Hdwy       | 3.608  | 3.327  | 2.218  | - | - | - |
| Pot Cap-1 Maneuver   | 511    | 832    | 1204   | - | - | - |
| Stage 1              | 805    | -      | -      | - | - | - |
| Stage 2              | 732    | -      | -      | - | - | - |
| Platoon blocked, %   |        |        |        | - | - | - |
| Mov Cap-1 Maneuver   | 455    | 832    | 1204   | - | - | - |
| Mov Cap-2 Maneuver   | 455    | -      | -      | - | - | - |
| Stage 1              | 716    | -      | -      | - | - | - |
| Stage 2              | 732    | -      | -      | - | - | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 15.9 | 6.4 | 0  |
| HCM LOS              | C    |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | EBLn1 | EBLn2 | SBT | SBR |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1204  | -   | 455   | 832   | -   | -   |
| HCM Lane V/C Ratio    | 0.107 | -   | 0.471 | 0.178 | -   | -   |
| HCM Control Delay (s) | 8.3   | 0   | 19.8  | 10.3  | -   | -   |
| HCM Lane LOS          | A     | A   | C     | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.4   | -   | 2.5   | 0.6   | -   | -   |



| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 2    | 65   | 84   | 42   | 41   | 2    | 23   | 93   | 36   | 2    | 124  | 5    |
| Future Vol, veh/h        | 2    | 65   | 84   | 42   | 41   | 2    | 23   | 93   | 36   | 2    | 124  | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   | 95   |
| Heavy Vehicles, %        | 1    | 4    | 7    | 3    | 1    | 1    | 5    | 5    | 3    | 1    | 1    | 1    |
| Mvmt Flow                | 2    | 68   | 88   | 44   | 43   | 2    | 24   | 98   | 38   | 2    | 131  | 5    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 326    | 322   | 134    | 381   | 305    | 117   | 136    | 0 | 0 | 136   | 0 | 0 |
| Stage 1              | 138    | 138   | -      | 165   | 165    | -     | -      | - | - | -     | - | - |
| Stage 2              | 188    | 184   | -      | 216   | 140    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.11   | 6.54  | 6.27   | 7.13  | 6.51   | 6.21  | 4.15   | - | - | 4.11  | - | - |
| Critical Hdwy Stg 1  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.11   | 5.54  | -      | 6.13  | 5.51   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.509  | 4.036 | 3.363  | 3.527 | 4.009  | 3.309 | 2.245  | - | - | 2.209 | - | - |
| Pot Cap-1 Maneuver   | 629    | 592   | 902    | 575   | 610    | 938   | 1430   | - | - | 1454  | - | - |
| Stage 1              | 868    | 779   | -      | 835   | 764    | -     | -      | - | - | -     | - | - |
| Stage 2              | 816    | 744   | -      | 784   | 783    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 584    | 581   | 902    | 465   | 598    | 938   | 1430   | - | - | 1454  | - | - |
| Mov Cap-2 Maneuver   | 584    | 581   | -      | 465   | 598    | -     | -      | - | - | -     | - | - |
| Stage 1              | 852    | 778   | -      | 820   | 750    | -     | -      | - | - | -     | - | - |
| Stage 2              | 754    | 731   | -      | 644   | 782    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB   |  | NB  |  | SB  |  |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 11.4 |  | 13.2 |  | 1.1 |  | 0.1 |  |
| HCM LOS              | B    |  | B    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1 | WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h)      | 1430  | -   | -   | 724   | 528   | 1454  | -   | -   |
| HCM Lane V/C Ratio    | 0.017 | -   | -   | 0.22  | 0.169 | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.6   | 0   | -   | 11.4  | 13.2  | 7.5   | 0   | -   |
| HCM Lane LOS          | A     | A   | -   | B     | B     | A     | A   | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.8   | 0.6   | 0     | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5    |      |      |      |      |      |
| Movement                 | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 146  | 30   | 36   | 66   | 98   | 114  |
| Future Vol, veh/h        | 146  | 30   | 36   | 66   | 98   | 114  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 0    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 3    | 1    | 10   | 2    | 1    | 6    |
| Mvmt Flow                | 159  | 33   | 39   | 72   | 107  | 124  |

| Major/Minor          | Minor2 | Major1 |      | Major2 |   |
|----------------------|--------|--------|------|--------|---|
| Conflicting Flow All | 319    | 169    | 231  | 0      | 0 |
| Stage 1              | 169    | -      | -    | -      | - |
| Stage 2              | 150    | -      | -    | -      | - |
| Critical Hdwy        | 6.43   | 6.21   | 4.2  | -      | - |
| Critical Hdwy Stg 1  | 5.43   | -      | -    | -      | - |
| Critical Hdwy Stg 2  | 5.43   | -      | -    | -      | - |
| Follow-up Hdwy       | 3.527  | 3.309  | 2.29 | -      | - |
| Pot Cap-1 Maneuver   | 672    | 878    | 1291 | -      | - |
| Stage 1              | 858    | -      | -    | -      | - |
| Stage 2              | 875    | -      | -    | -      | - |
| Platoon blocked, %   |        |        |      | -      | - |
| Mov Cap-1 Maneuver   | 651    | 878    | 1291 | -      | - |
| Mov Cap-2 Maneuver   | 651    | -      | -    | -      | - |
| Stage 1              | 831    | -      | -    | -      | - |
| Stage 2              | 875    | -      | -    | -      | - |

| Approach             | EB   | NB  | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 12.3 | 2.8 | 0  |
| HCM LOS              | B    |     |    |

| Minor Lane/Major Mvmt | NBL  | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h)      | 1291 | -   | 681   | -   | -   |
| HCM Lane V/C Ratio    | 0.03 | -   | 0.281 | -   | -   |
| HCM Control Delay (s) | 7.9  | 0   | 12.3  | -   | -   |
| HCM Lane LOS          | A    | A   | B     | -   | -   |
| HCM 95th %tile Q(veh) | 0.1  | -   | 1.1   | -   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.3  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↑    | ↑    |      | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 321  | 112  | 105  | 165  | 86   | 120  |
| Future Vol, veh/h        | 321  | 112  | 105  | 165  | 86   | 120  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 200  | -    | -    | 0    | 125  |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 1    | 1    | 10   | 2    | 4    | 10   |
| Mvmt Flow                | 331  | 115  | 108  | 170  | 89   | 124  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0      | 0      | 446    | 0 | 717   |
| Stage 1              | -      | -      | -      | - | 331   |
| Stage 2              | -      | -      | -      | - | 386   |
| Critical Hdwy        | -      | -      | 4.2    | - | 6.44  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.44  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.44  |
| Follow-up Hdwy       | -      | -      | 2.29   | - | 3.536 |
| Pot Cap-1 Maneuver   | -      | -      | 1073   | - | 393   |
| Stage 1              | -      | -      | -      | - | 723   |
| Stage 2              | -      | -      | -      | - | 683   |
| Platoon blocked, %   | -      | -      | -      | - | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1073   | - | 349   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 349   |
| Stage 1              | -      | -      | -      | - | 723   |
| Stage 2              | -      | -      | -      | - | 607   |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 3.4 | 14.4 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 349   | 693   | -   | -   | 1073  | -   |
| HCM Lane V/C Ratio    | 0.254 | 0.179 | -   | -   | 0.101 | -   |
| HCM Control Delay (s) | 18.8  | 11.3  | -   | -   | 8.7   | 0   |
| HCM Lane LOS          | C     | B     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 1     | 0.6   | -   | -   | 0.3   | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.6  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      |      | ↔    | ↔    |      |
| Traffic Vol, veh/h       | 416  | 25   | 3    | 205  | 65   | 7    |
| Future Vol, veh/h        | 416  | 25   | 3    | 205  | 65   | 7    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 1    | 10   | 10   | 3    | 10   | 10   |
| Mvmt Flow                | 452  | 27   | 3    | 223  | 71   | 8    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 479    | 0 | 695  |
| Stage 1              | -      | -      | -      | - | 466  |
| Stage 2              | -      | -      | -      | - | 229  |
| Critical Hdwy        | -      | -      | 4.2    | - | 6.5  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.5  |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.5  |
| Follow-up Hdwy       | -      | -      | 2.29   | - | 3.59 |
| Pot Cap-1 Maneuver   | -      | -      | 1043   | - | 396  |
| Stage 1              | -      | -      | -      | - | 615  |
| Stage 2              | -      | -      | -      | - | 791  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 1043   | - | 395  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 395  |
| Stage 1              | -      | -      | -      | - | 615  |
| Stage 2              | -      | -      | -      | - | 789  |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.1 | 15.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 408   | -   | -   | 1043  | -   |
| HCM Lane V/C Ratio    | 0.192 | -   | -   | 0.003 | -   |
| HCM Control Delay (s) | 15.9  | -   | -   | 8.5   | 0   |
| HCM Lane LOS          | C     | -   | -   | A     | A   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 0     | -   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |
| Movement                 | EBL  | EBR  | SET  | SER  | NWL  | NWT  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 58   | 66   | 75   | 53   | 115  | 243  |
| Future Vol, veh/h        | 58   | 66   | 75   | 53   | 115  | 243  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 125  | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 86   | 86   | 86   | 86   | 86   | 86   |
| Heavy Vehicles, %        | 2    | 20   | 9    | 2    | 5    | 4    |
| Mvmt Flow                | 67   | 77   | 87   | 62   | 134  | 283  |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 669    | 118    | 0      | 0 | 149   |
| Stage 1              | 118    | -      | -      | - | -     |
| Stage 2              | 551    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.4    | -      | - | 4.15  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.48   | -      | - | 2.245 |
| Pot Cap-1 Maneuver   | 423    | 887    | -      | - | 1414  |
| Stage 1              | 907    | -      | -      | - | -     |
| Stage 2              | 577    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 376    | 887    | -      | - | 1414  |
| Mov Cap-2 Maneuver   | 376    | -      | -      | - | -     |
| Stage 1              | 907    | -      | -      | - | -     |
| Stage 2              | 512    | -      | -      | - | -     |

| Approach             | EB   | SE | NW  |
|----------------------|------|----|-----|
| HCM Control Delay, s | 12.8 | 0  | 2.5 |
| HCM LOS              | B    |    |     |

| Minor Lane/Major Mvmt | NWL   | NWT | EBLn1 | EBLn2 | SET | SER |
|-----------------------|-------|-----|-------|-------|-----|-----|
| Capacity (veh/h)      | 1414  | -   | 376   | 887   | -   | -   |
| HCM Lane V/C Ratio    | 0.095 | -   | 0.179 | 0.087 | -   | -   |
| HCM Control Delay (s) | 7.8   | 0   | 16.7  | 9.4   | -   | -   |
| HCM Lane LOS          | A     | A   | C     | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0.3   | -   | 0.6   | 0.3   | -   | -   |

JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

LEFT TURN WARRANT CALCULATION SHEET

*APPENDIX*

Exhibit 1310-7a Left-Turn Storage Guidelines: Two-Lane, Unsignalized

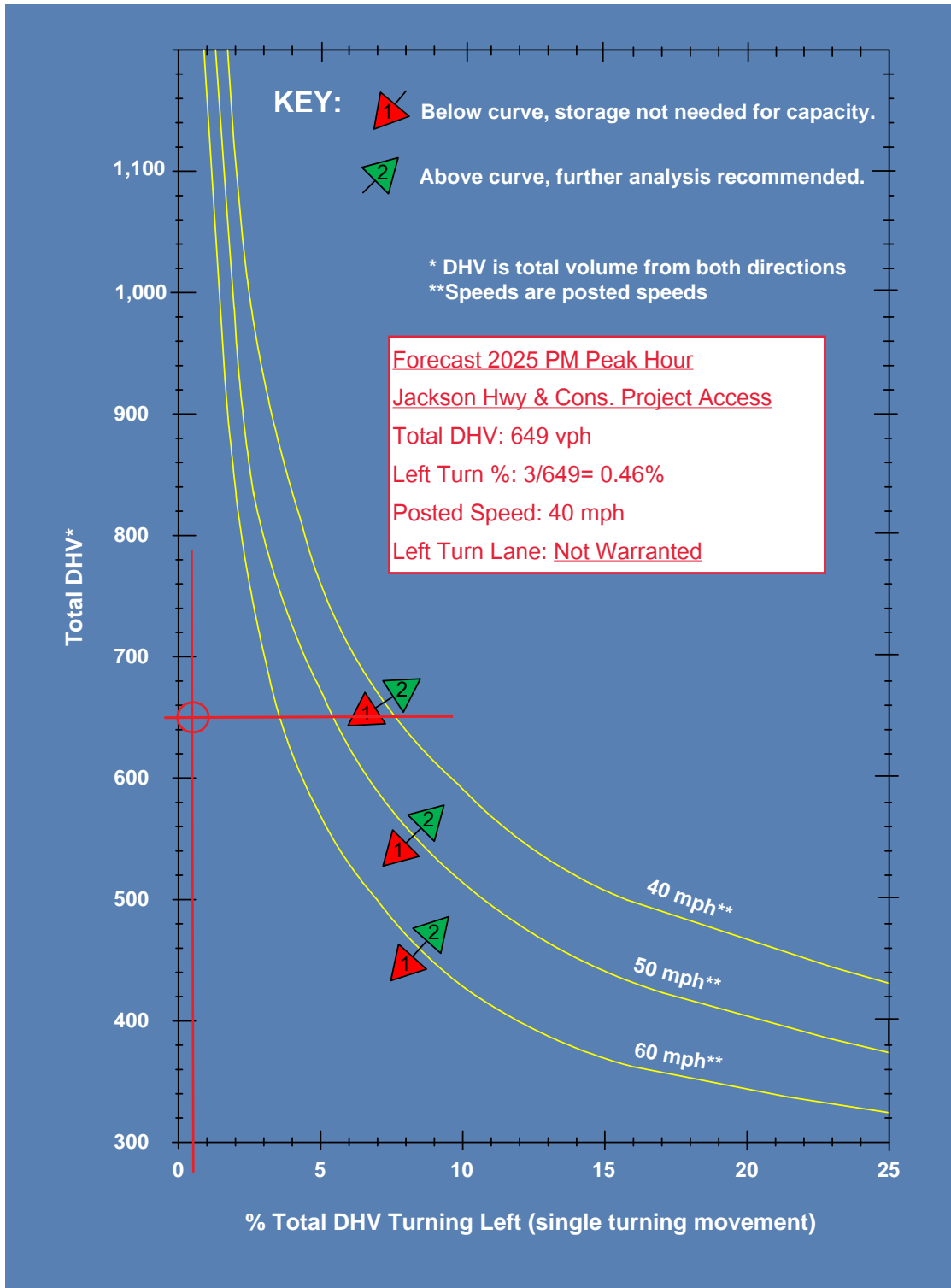
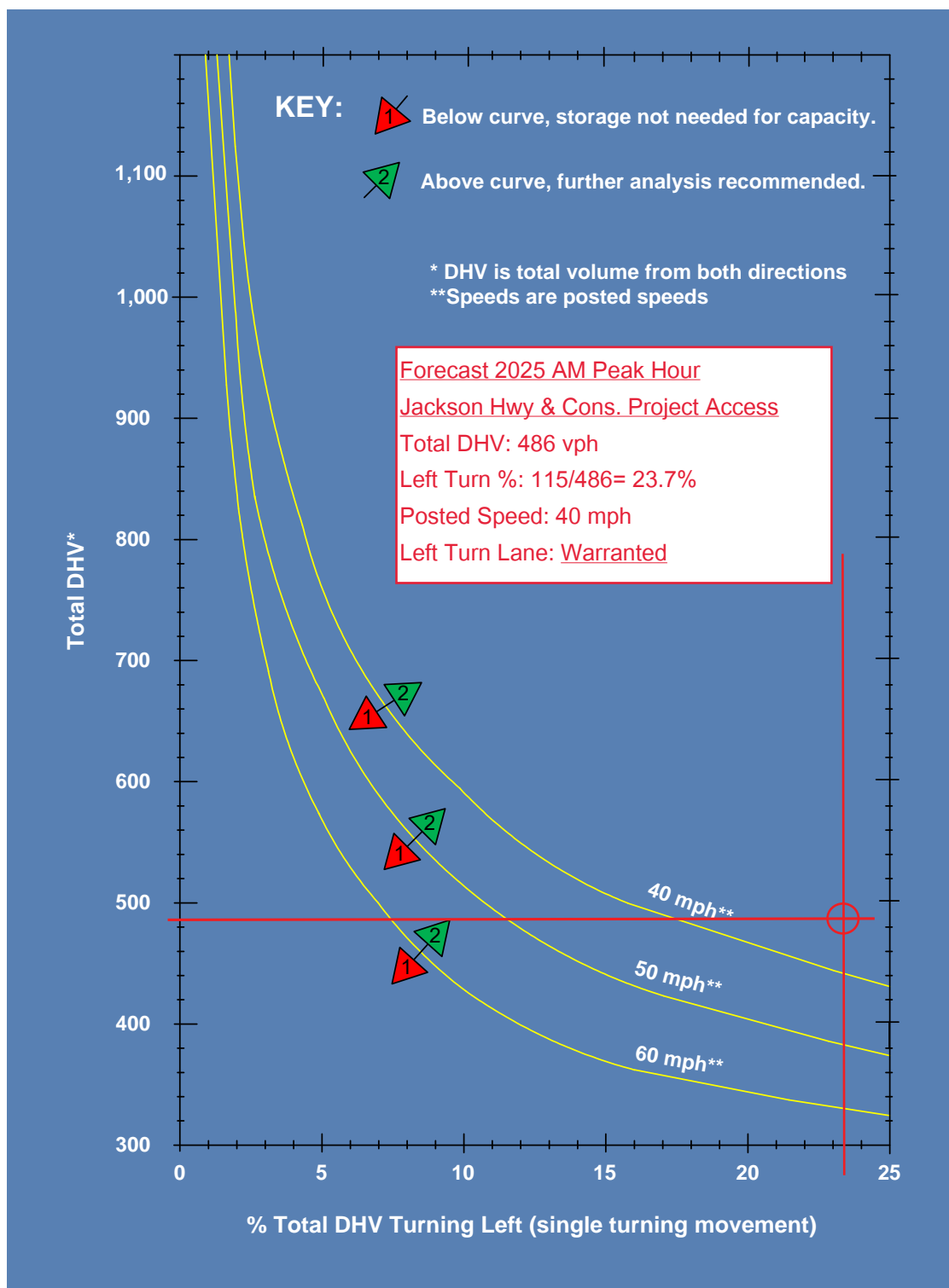


Exhibit 1310-7a Left-Turn Storage Guidelines: Two-Lane, Unsignalized



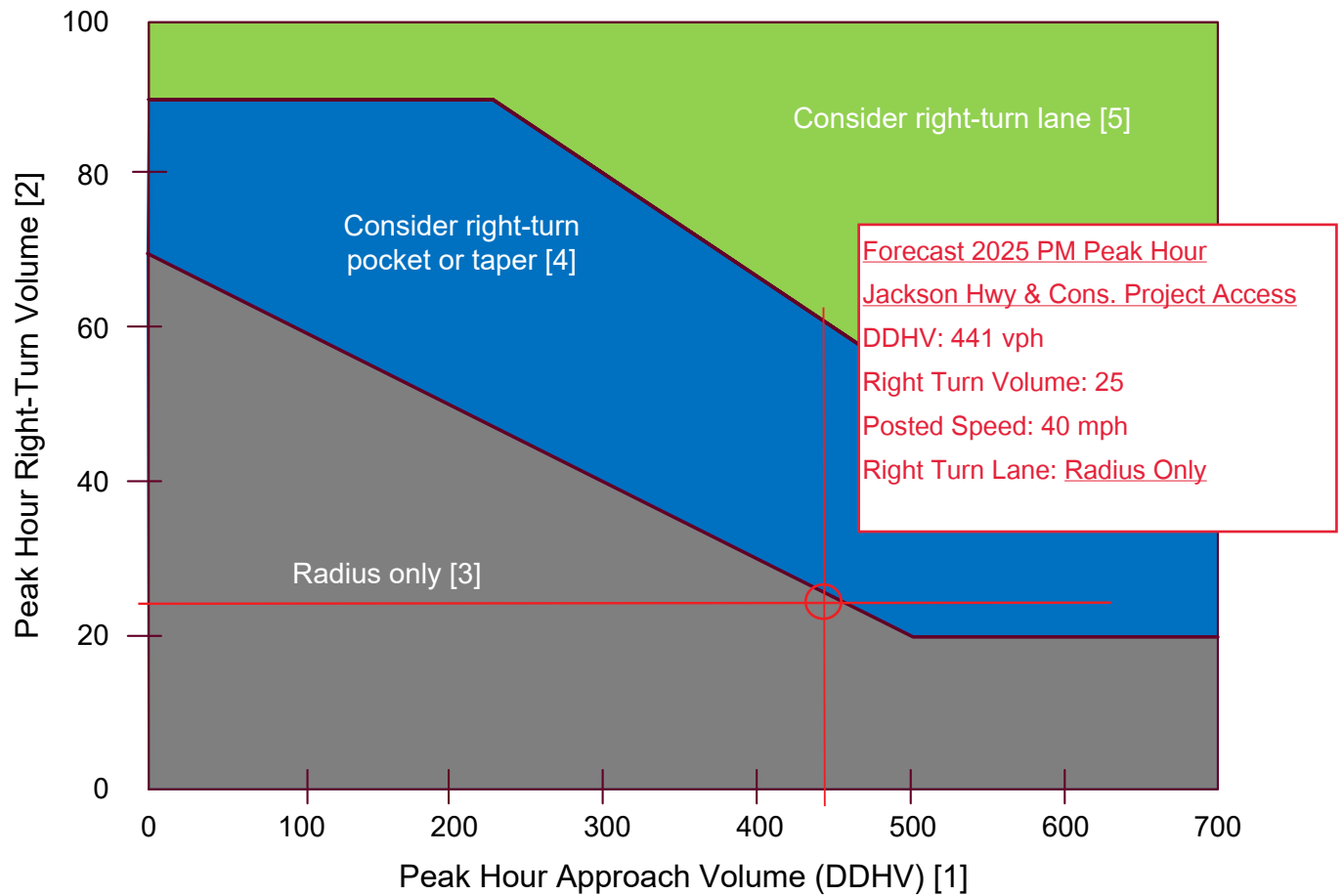


JACKSON HIGHWAY WAREHOUSE  
TRAFFIC IMPACT ANALYSIS

RIGHT TURN WARRANT CALCULATION SHEET

*APPENDIX*

## Exhibit 1310-11 Right-Turn Lane Guidelines



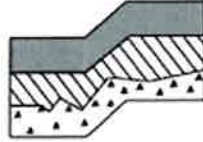
### Notes:

- [1] For two-lane highways, use the peak hour DDHV (through + right-turn).  
 For multilane, highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right-turn).
- [2] When all three of the following conditions are met, reduce the right-turn DDHV by 20:
  - The posted speed is 45 mph or below
  - The right-turn volume is greater than 40 VPH
  - The peak hour approach volume (DDHV) is less than 300 VPH
- [3] For right-turn corner design, see Exhibit 1310-6.
- [4] For right-turn pocket or taper design, see Exhibit 1310-12.
- [5] For right-turn lane design, see Exhibit 1310-13.

**Attachment 2**

Design Memorandum prepared by Terra Associates, Inc.  
Dated February 28, 2022

# DESIGN MEMORANDUM



## TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology  
and  
Environmental Earth Sciences

|          |                                |                 |                              |
|----------|--------------------------------|-----------------|------------------------------|
| To:      | <u>Mr. Joel Molander</u>       | Date:           | <u>February 28, 2022</u>     |
|          | <u>Puget Western, Inc.</u>     | Project Number: | <u>T-8643</u>                |
| From:    | <u>Carolyn S. Decker, P.E.</u> | Project Name:   | <u>PWI Chehalis Property</u> |
| Subject: | <u>Groundwater</u>             |                 | <u>Chehalis, Washington</u>  |

Joel:

As requested by Barghausen Engineering, Inc. we have prepared this memo to discuss the potential impacts of stormwater on the groundwater at the PWI Chehalis Property in Chehalis, Washington. The purpose of our review was to determine the potential impacts of the site stormwater design on the groundwater. The potential impacts to the groundwater could come from infiltrating the site stormwater.

The site soils consist of silt and clay overlying clayey gravels intermixed with silty sands. These soils are typically not suitable for support of infiltration as the fines content of the material prevents the downward migration of the water. As such, infiltration is not proposed as a method of stormwater management for the project site.

With the stormwater being detained and released through conventional methods and not infiltrating into the ground, the risk of the stormwater impacting the groundwater is negligible.

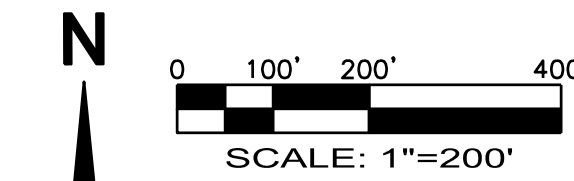
We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call.



cc: Mr. Ben Eldridge, Barghausen Consulting Engineers, Inc.

**Attachment 3**

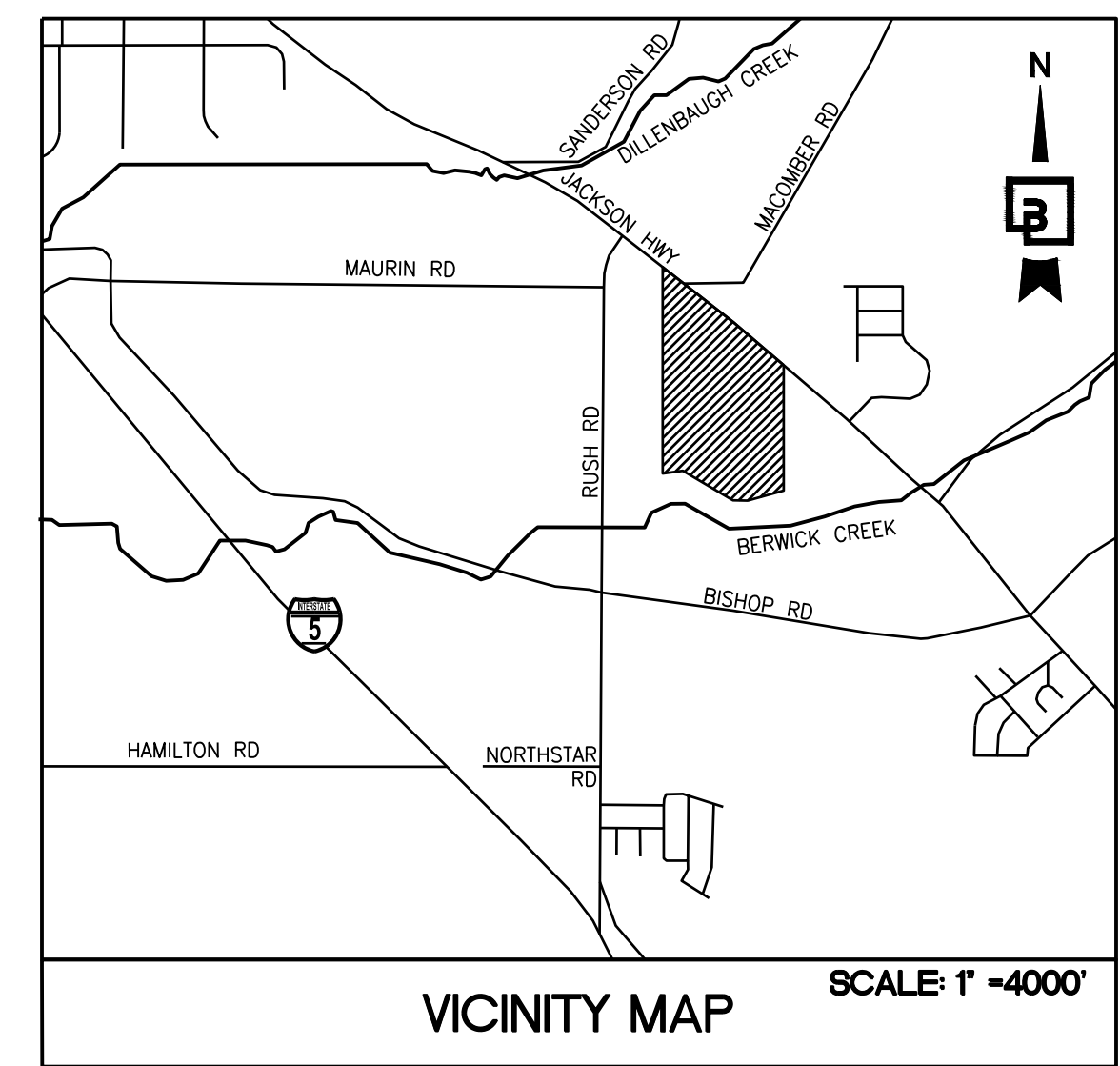
Revised Civil Plan Set prepared by Barghausen Consulting Engineers  
Dated March 11, 2022



# CHEHALIS INDUSTRIAL PARK

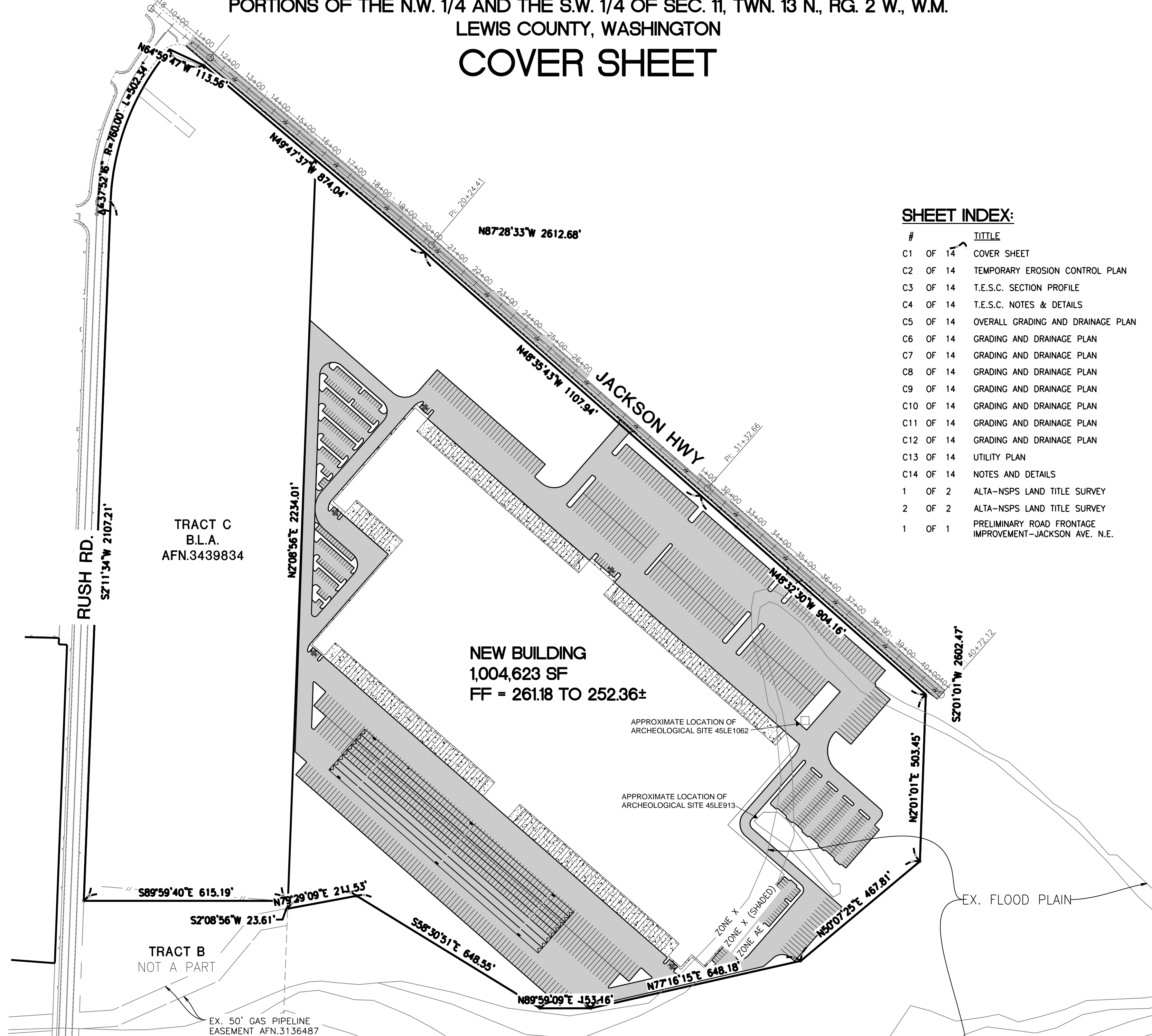
PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## COVER SHEET



### GENERAL SITE NOTES:

- THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS.
- CONTRACTOR SHALL ASSURE THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR SHOWN ON RECORD DRAWING PROVIDED BY OTHERS ARE SHOWN HEREON. EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND ARE SUBJECT TO A DEGREE OF UNKNOWN VARIATION. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. BARGHAUSEN CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR RECORDS OF OTHERS. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
- INSPECTION OF SITE WORK WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE GOVERNING JURISDICTION. INSPECTION OF PRIVATE FACILITIES WILL BE ACCOMPLISHED BY A REPRESENTATIVE OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF BACKFILLING ALL CONSTRUCTION.
- PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY THE CONTRACTOR SHALL CONTACT THE AGENCY AND/OR UTILITY INSPECTION PERSONNEL AND ARRANGE ANY REQUIRED PRE-CONSTRUCTION MEETING(S). CONTRACTOR SHALL PROVIDE ONE WEEK MINIMUM ADVANCE NOTIFICATION TO OWNER, FIELD ENGINEER AND ENGINEER OF PRE-CONSTRUCTION MEETINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR WORKER AND SITE SAFETY AND SHALL COMPLY WITH THE LATEST OSHA STANDARDS AND REGULATIONS, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC AND TO PREVENT IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED.
- PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT ALL ADJACENT PUBLIC AND PRIVATE PROPERTIES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITY SERVICES THAT ARE TO REMAIN OPERATIONAL WITHIN THE CONSTRUCTION AREA WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
- TWO (2) COPIES OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. ONE (1) SET WITH RECORDS OF AS-BUILT INFORMATION SHALL BE SUBMITTED TO BARGHAUSEN CONSULTING ENGINEERS, INC. AT COMPLETION OF PROJECT.
- CONTRACTOR SHALL OBTAIN SERVICES OF A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL CONTROL FOR ALL NEW IMPROVEMENTS. STAKING CONTROL SHALL BE TAKEN FROM ELECTRONIC PLAN FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC.
- CONTRACTOR SHALL REQUEST FROM BARGHAUSEN CONSULTING ENGINEERS, INC., PRIOR TO ANY CONSTRUCTION STAKING OR CONSTRUCTION WORK, A FORMAL CONSTRUCTION RELEASE PLAN SET OR SPECIFIC RELEASE IN WRITING. THE APPROVED AGENCY PERMIT DRAWINGS WILL NOT BE CONSIDERED CONSTRUCTION RELEASE PLANS BY BARGHAUSEN CONSULTING ENGINEERS, INC. UNLESS BARGHAUSEN CONSULTING ENGINEERS, INC. HAS GIVEN A FORMAL WRITTEN RELEASE OR ISSUED A CONSTRUCTION RELEASE PLAN SET.



### SHEET INDEX:

| #   | TITLE  |
|-----|--|
| C1  | OF 14 COVER SHEET  |
| C2  | OF 14 TEMPORARY EROSION CONTROL PLAN                         |
| C3  | OF 14 T.E.S.C. SECTION PROFILE                               |
| C4  | OF 14 T.E.S.C. NOTES & DETAILS                               |
| C5  | OF 14 OVERALL GRADING AND DRAINAGE PLAN                      |
| C6  | OF 14 GRADING AND DRAINAGE PLAN                              |
| C7  | OF 14 GRADING AND DRAINAGE PLAN                              |
| C8  | OF 14 GRADING AND DRAINAGE PLAN                              |
| C9  | OF 14 GRADING AND DRAINAGE PLAN                              |
| C10 | OF 14 GRADING AND DRAINAGE PLAN                              |
| C11 | OF 14 GRADING AND DRAINAGE PLAN                              |
| C12 | OF 14 GRADING AND DRAINAGE PLAN                              |
| C13 | OF 14 UTILITY PLAN   |
| C14 | OF 14 NOTES AND DETAILS                                      |
| 1   | OF 2 ALTA-NSPS LAND TITLE SURVEY                             |
| 2   | OF 2 ALTA-NSPS LAND TITLE SURVEY                             |
| 1   | OF 1 PRELIMINARY ROAD FRONTAGE IMPROVEMENT-JACKSON AVE. N.E. |

### SURVEY INFORMATION:

**BASIS OF BEARINGS** NAD83/91 (WSDOT)  
BASIS OF BEARINGS FOR THIS SURVEY IN NAD 83/91 PER WSDOT. WSDOT CONTROL POINT NO. CHE-05 WAS HELD FOR POSITION AND A LINE BETWEEN SAID POINT NO. CHE-05 AND CHE-03 WAS HELD FOR ROTATION, BEING SOUTH 48°39'23" EAST.

**TAX PARCEL NUMBERS:**  
APN: 01780001009  
APN: 017800014003  
APN: 017800001010  
APN: 017800003000  
APN: 017775002000

**ADDRESSES:**  
01780001009 (NOT ASSIGNED)  
017800014003 (NOT ASSIGNED)  
2844 JACKSON HIGHWAY, CHEHALIS (017800001010)  
2844 JACKSON HIGHWAY, CHEHALIS (017800003000)  
2001 RUSH ROAD, CHEHALIS (017775002000)

**LEGAL DESCRIPTION:**  
(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FILE NO. NCS-827205-0R1 DATED DECEMBER 9, 2016 AT 8:00 A.M.)

**PARCEL A:**  
TRACT B OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED OCTOBER 27, 2009, UNDER AUDITOR'S FILE NO. 5439834, IN VOLUME 3 OF BOUNDARY LINE ADJUSTMENTS, PAGE 121, RECORDS OF LEWIS COUNTY, WASHINGTON, BEING LOCATED WITHIN THE SOUTHWEST QUARTER OF SECTION 10, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

**PARCEL B:**  
TRACT C OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED NOVEMBER 18, 2015, UNDER AUDITOR'S FILE NO. 5439834, IN VOLUME 3 OF BOUNDARY LINE ADJUSTMENTS, PAGE 176, RECORDS OF LEWIS COUNTY, WASHINGTON, BEING LOCATED WITHIN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

**PARCEL C:**  
THAT PORTION OF THE EAST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON LYING SOUTHERLY OF THE SOUTHERLY BOUNDARY OF JACKSON HIGHWAY, FORMERLY OLD PACIFIC HIGHWAY NO. 99.

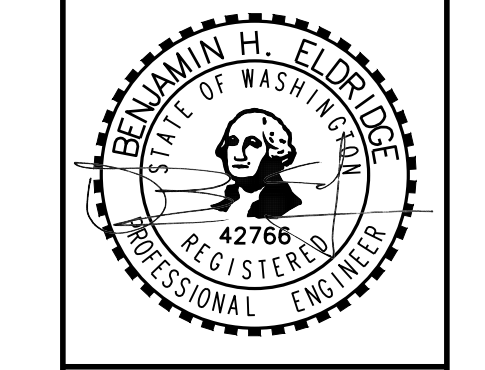
ALSO THAT PORTION OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE EAST HALF OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 11, FOR A DISTANCE OF 1178.22 FEET TO THE SOUTH LINE OF THE JACKSON HIGHWAY, FORMERLY OLD PACIFIC HIGHWAY, ALL IN SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

EXCEPT THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, WILLAMETTE MERIDIAN, LEWIS COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:  
BEGINNING AT A CONCRETE MONUMENT, AS SHOWN IN VOLUME 16 OF SURVEYS, PAGE 280, LEWIS COUNTY AUDITOR'S RECORDS, AT THE CENTER OF SECTION 11;  
THENCE SOUTH 02°01'52" WEST, 2803.58 FEET TO A 1/2 INCH IRON ROD AT THE SOUTH QUARTER CORNER OF SECTION 11 AND THE TRUE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED;  
THENCE NORTH 02°01'52" EAST, ALONG THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11, FOR A DISTANCE OF 1178.22 FEET TO THE SOUTH LINE OF THE JACKSON HIGHWAY;  
THENCE FOLLOWING SAID SOUTH RIGHT-OF-WAY LINE, ALONG THE ARC OF A 3785 RADIUS CURVE TO THE LEFT (THE RADIAL BEARING OF WHICH IS SOUTH 42°20'21" WEST), THROUGH A CENTRAL ANGLE OF 00°53'59", FOR AN ARC DISTANCE OF 59.44 FEET;  
THENCE NORTH 48°33'38" WEST, 25.08 FEET TO A POINT THAT IS 65 FEET WEST OF THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11;  
THENCE LEAVING SAID SOUTH RIGHT-OF-WAY LINE, SOUTH 02°01'52" WEST, PARALLEL WITH THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11, FOR A DISTANCE OF 497.56 FEET;  
THENCE SOUTH 50°08'18" WEST, 467.81 FEET;  
THENCE SOUTH 77°17'06" WEST, 648.18 FEET;  
THENCE SOUTH 90°00'00" WEST, 153.16 FEET;  
THENCE NORTH 58°30'00" WEST, 648.55 FEET;  
THENCE SOUTH 79°30'00" WEST, 211.06 FEET TO THE WEST LINE OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11;  
THENCE SOUTH 02°09'16" WEST, 520.39 FEET TO THE SOUTHWEST CORNER OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER;  
THENCE SOUTH 87°49'48" EAST, 1964.92 FEET TO THE TRUE POINT OF BEGINNING.

| No. | Date | By | Cd. | Appr. |
|-----|------|----|-----|-------|
|     |      |    |     |       |

Title: COVER SHEET FOR CHEHALIS INDUSTRIAL PARK

For: PUGET WESTERN, INC.  
2000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011



| Designed | Drawn | Checked | Approved | Date |
|----------|-------|---------|----------|------|
|          |       |         |          |      |

Scale: Horizontal 1"=150', Vertical N/A

**DEVELOPER**  
PUGET WESTERN, INC.  
19515 NORTH CREEK PARKWAY, STE 310  
BOTHELL, WA 98011  
PH: (425) 765-8002  
CONTACT: JOEL MOLANDER  
EMAIL: JOEL.MOLANDER@PUGETWESTERN.COM

**CULTURAL RESOURCE**  
CULTURAL RESOURCE CONSULTANTS, INC.  
710 ERICKSEN AVE NE  
BRAINBRIDGE ISLAND, WA 98110  
PHONE (206) 770-1401  
CONTACT: MARGARET BERGER  
EMAIL: MBERGER@CULTRES.COM

**ENGINEER/SURVEYOR**  
BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE S  
KENT WA, 98032  
PH: (425) 251-6222  
CONTACT: DAN BALMELLI, P.E.  
EMAIL: DBALMELLI@BARGHAUSEN.COM

**WETLAND CONSULTANT**  
SOUNDVIEW CONSULTANTS  
2907 HARBORVIEW DRIVE, SUITE D  
GIG HARBOR, WA 98335  
PH: (253)-514-8952  
CONTACT: RACHEAL VILLA  
EMAIL: RACHEAL@SOUNDVIEWCONSULTANTS.COM

**LANDSCAPE**  
BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE S  
KENT WA, 98032  
PH: (425) 251-6222  
CONTACT: JEFF WARLEY  
EMAIL: JWARLEY@BARGHAUSEN.COM

**TERAFFIC**  
HEATH & ASSOCIATES, INC.  
1011 E MAIN SUITE 453  
PYALLUP, WA 98371  
PHONE (253) 770-1401  
CONTACT: GREG HEATH  
EMAIL: GHEATH@HEATHTRAFFIC.COM

| Job Number | Sheet    |
|------------|----------|
| 14030      | C1 of 16 |

APPROVED FOR CONSTRUCTION

APPROVED BY: PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE: \_\_\_\_\_

APPROVAL EXPIRES: \_\_\_\_\_

### LEGEND:

|  |                                  |  |
|--|----------------------------------|--|
|  | PROPOSED TYPE II CATCH BASIN     |  |
|  | PROPOSED TYPE I CATCH BASIN      |  |
|  | PROPOSED STORM DRAIN FLOW ARROW  |  |
|  | PROPOSED STORM DRAINAGE LINE     |  |
|  | PROPOSED TRENCH DRAIN            |  |
|  | PROPOSED SANITARY SEWER LINE     |  |
|  | PROPOSED SANITARY SEWER CLEANOUT |  |
|  | PROPOSED SANITARY SEWER MANHOLE  |  |
|  | PROPOSED WATERMAIN               |  |
|  | PROPOSED FIRE HYDRANT            |  |
|  | PROPOSED WATER VALVE             |  |
|  | PROPOSED CONCRETE BLOCKING       |  |
|  | PROPOSED 90° BEND                |  |
|  | PROPOSED SPOT ELEVATIONS         |  |
|  | EXISTING SPOT ELEVATIONS         |  |
|  | PROPOSED CONTOURS                |  |
|  | EXISTING CONTOURS                |  |
|  | PROPOSED BUILDING LINE           |  |
|  | PROPOSED PAVEMENT                |  |
|  | PROPOSED CONCRETE                |  |
|  |                                  |  |
|  |                                  |  |
|  |                                  |  |

### UTILITY CONFLICT NOTE:

**CAUTION:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POTHOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 811 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

### HORIZONTAL CONTROL NOTE:

CONTRACTOR SHALL HAVE ALL PROPERTY LINES, CURBS, SIDEWALK, STRUCTURES, CONCRETE PADS AND ANY OTHER ABOVE GROUND PERMANENT STRUCTURE DEPICTED ON THESE PLANS STAKED FOR CONSTRUCTION BY A LICENSED SURVEYOR. LICENSED SURVEYOR SHALL STAKE ALL ITEMS USING COORDINATE GEOMETRY (RECTIFIED TO SITE CONTROL) CONTAINED IN CAD DRAWING FILES PROVIDED BY BARGHAUSEN CONSULTING ENGINEERS, INC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETRIEVE LATEST CAD FILES FROM BARGHAUSEN CONSULTING ENGINEERS INC., REFLECTING ANY ISSUED PLAN REVISIONS. BARGHAUSEN CONSULTING ENGINEERS SHALL IMMEDIATELY BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.

### MONUMENT DEMOLITION NOTE:

CONTRACTOR SHALL REFER TO THE REPORT OF GEOTECHNICAL INVESTIGATION DATED NOVEMBER 29TH, 2007 FOR THIS SITE PREPARED BY GEOENGINEERS, INC. FOR GRADING RECOMMENDATIONS. EARTHWORK QUANTITIES ARE FOR PERMITTING PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES. CONTRACTOR SHALL PERFORM AN INDEPENDENT ANALYSIS FOR THE PURPOSES OF PREPARING THEIR BID.

### LOT COVERAGE SUMMARY

|                     |                                    |
|---------------------|------------------------------------|
| BUILDINGS:          | 1,002,115 S.F. = 23.01 AC (33.15%) |
| ASPHALT/CONCRETE:   | 1,174,502 S.F. = 29.26 AC (42.16%) |
| LANDSCAPE/UNDURBED: | 583,033 S.F. = 13.45 AC (19.39%)   |
| RETAINED WETLANDS:  | 160,225 S.F. = 3.68 AC (5.31%)     |
| TOTAL:              | 3,022,874 S.F. = 69.40 AC (100%)   |

### ESTIMATED EARTHWORK QUANTITIES:

|       |                   |
|-------|-------------------|
| CUT:  | 1577 CY           |
| FILL: | 448,656 CY        |
| NET:  | 447,279 CY (FILL) |

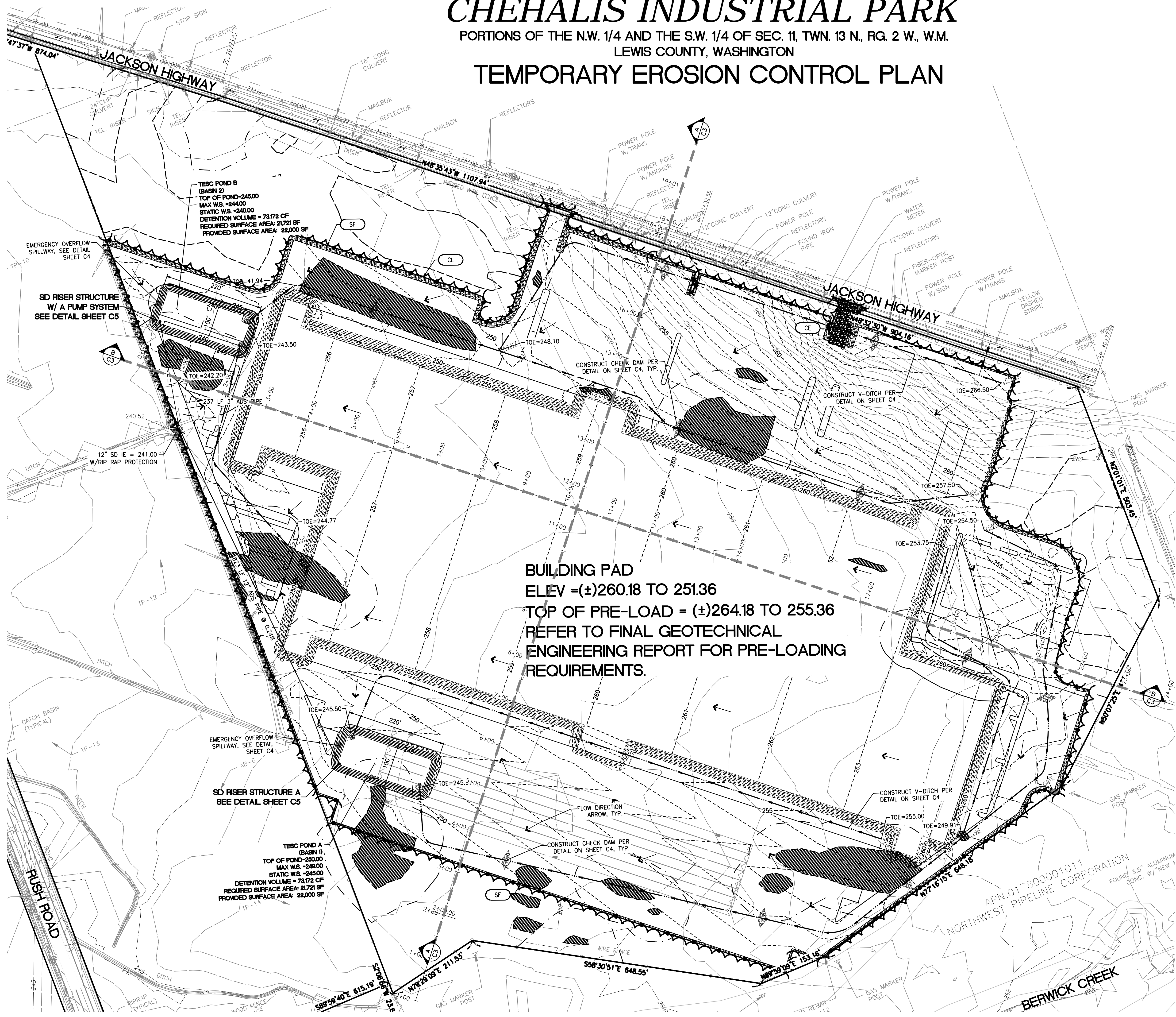
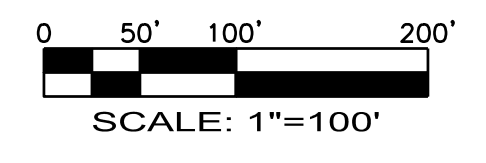
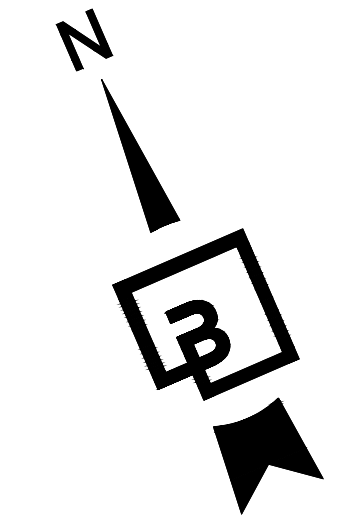
### GEOTECHNICAL REPORT NOTES:

- THE FOLLOWING GEOTECHNICAL REPORTS FOR THE SITE SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS:  
GEOTECHNICAL ENGINEERING REPORT  
TERRACON PROJECT NO. 81215062  
DATE: SEPTEMBER 10, 2021  
PREPARED BY: TERRACON CONSULTING, INC.  
21905 64TH AVE, W, SUITE 100  
MOUNTLAKE TERRACE, WA 98043  
PHONE (253) 771-3304
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF THE SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB, AND PAVING CONSTRUCTION.
- ANY PROVISIONS OF THE SOILS REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRE FURTHER CLARIFICATION, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR DETERMINATION.
- A REPRESENTATIVE OF THE SOILS ENGINEER SHALL BE AVAILABLE TO OBSERVE AND APPROVE THE EARTHWORK OPERATIONS AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS CERTIFYING THAT THE METHODS AND MATERIALS OF THE EARTHWORK OPERATIONS WERE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS INVESTIGATION AND THAT THE WORK WAS PERFORMED TO HIS/HER SATISFACTION.
- THE SOILS ENGINEER SHOULD BE NOTIFIED AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY SITE CLEARING OR GRADING.

# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## TEMPORARY EROSION CONTROL PLAN



**BUILDING PAD**  
ELEV = (±)260.18 TO 251.36  
TOP OF PRE-LOAD = (±)264.18 TO 255.36  
REFER TO FINAL GEOTECHNICAL  
ENGINEERING REPORT FOR PRE-LOADING  
REQUIREMENTS.

**GENERAL NOTES:**

- CONTRACTOR SHALL PROTECT ALL WETLANDS TO REMAIN. SEE WETLAND MITIGATION PLAN FOR MORE DETAILS

**TESC LEGEND:**

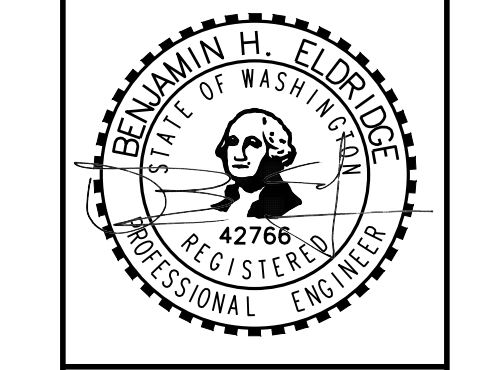
|    |  |                       |
|----|--|-----------------------|
| IP |  | INLET PROTECTION      |
| SF |  | SILT FENCE            |
| CL |  | CLEARING LIMITS       |
| CE |  | CONSTRUCTION ENTRANCE |
|    |  | TEMPORARY V-DITCH     |
|    |  | ROCK CHECK DAM        |
|    |  | FLOW ARROW            |

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT  
DATE  
APPROVAL EXPIRES

Revision  
No. Date By Cld. Appr.  
Title: **TEMPORARY EROSION CONTROL PLAN**  
FOR  
**CHEHALIS INDUSTRIAL PARK**

For: **PUGET WESTERN, INC.**  
**2000 N CREEK PARKWAY**  
**BUILDING H**  
**BOTHELL, WA 98011**



Scale: Horizontal 1"=100' Vertical N/A  
Designed: SZG  
Drawn: SZG  
Checked: BHE  
Approved: BHE  
Date: 9/22/21

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

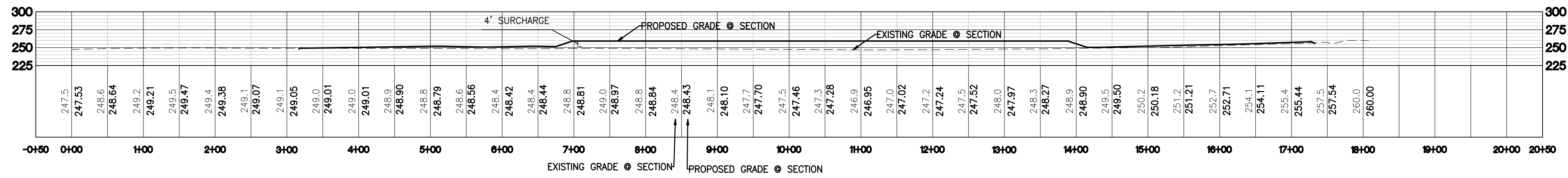
Job Number: **14030**  
Sheet: **C2** of **16**

P:\14000A\14030\preliminary\14030-E.dwg 11/12/2021 10:37 AM BELDRIDGE

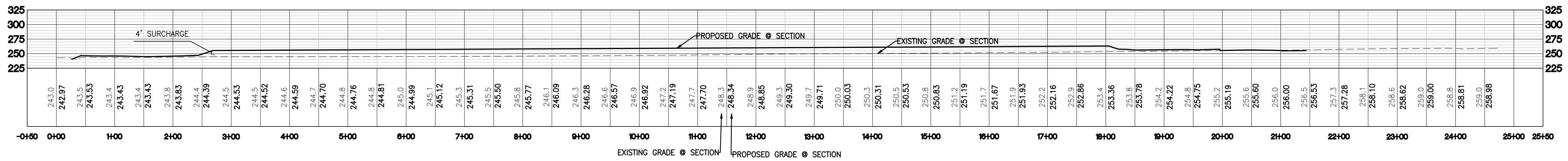
# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## T.E.S.C. SECTION PROFILE



**A** PROPOSED SURFACE PROFILE AT SECTION  
SCALE: 1" = 100'



**B** PROPOSED SURFACE PROFILE AT SECTION  
SCALE: 1" = 100'

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

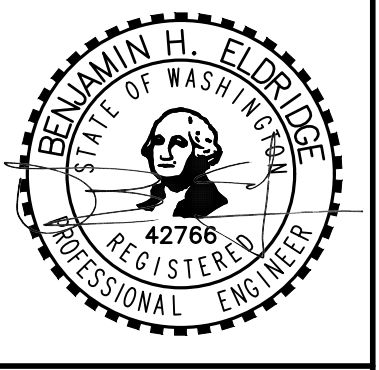
DATE

APPROVAL EXPIRES

| No. | Date | By | Clk. | Appr. | Revision |
|-----|------|----|------|-------|----------|
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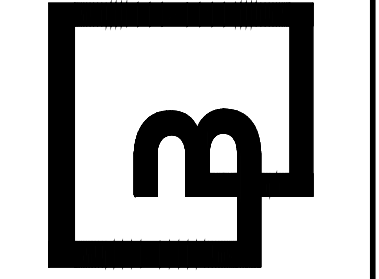
Title: T.E.S.C. SECTION PROFILE  
FOR CHEHALIS INDUSTRIAL PARK

For: PUGET WESTERN, INC.  
20000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011



|          |            |     |          |     |
|----------|------------|-----|----------|-----|
| Scale:   | Horizontal | N/A | Vertical | N/A |
| Designed | SZG        |     |          |     |
| Drawn    | SZG        |     |          |     |
| Checked  | BHE        |     |          |     |
| Approved | BHE        |     |          |     |
| Date     | 9/22/21    |     |          |     |

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)



Job Number  
**14030**

Sheet  
**C4** of **16**

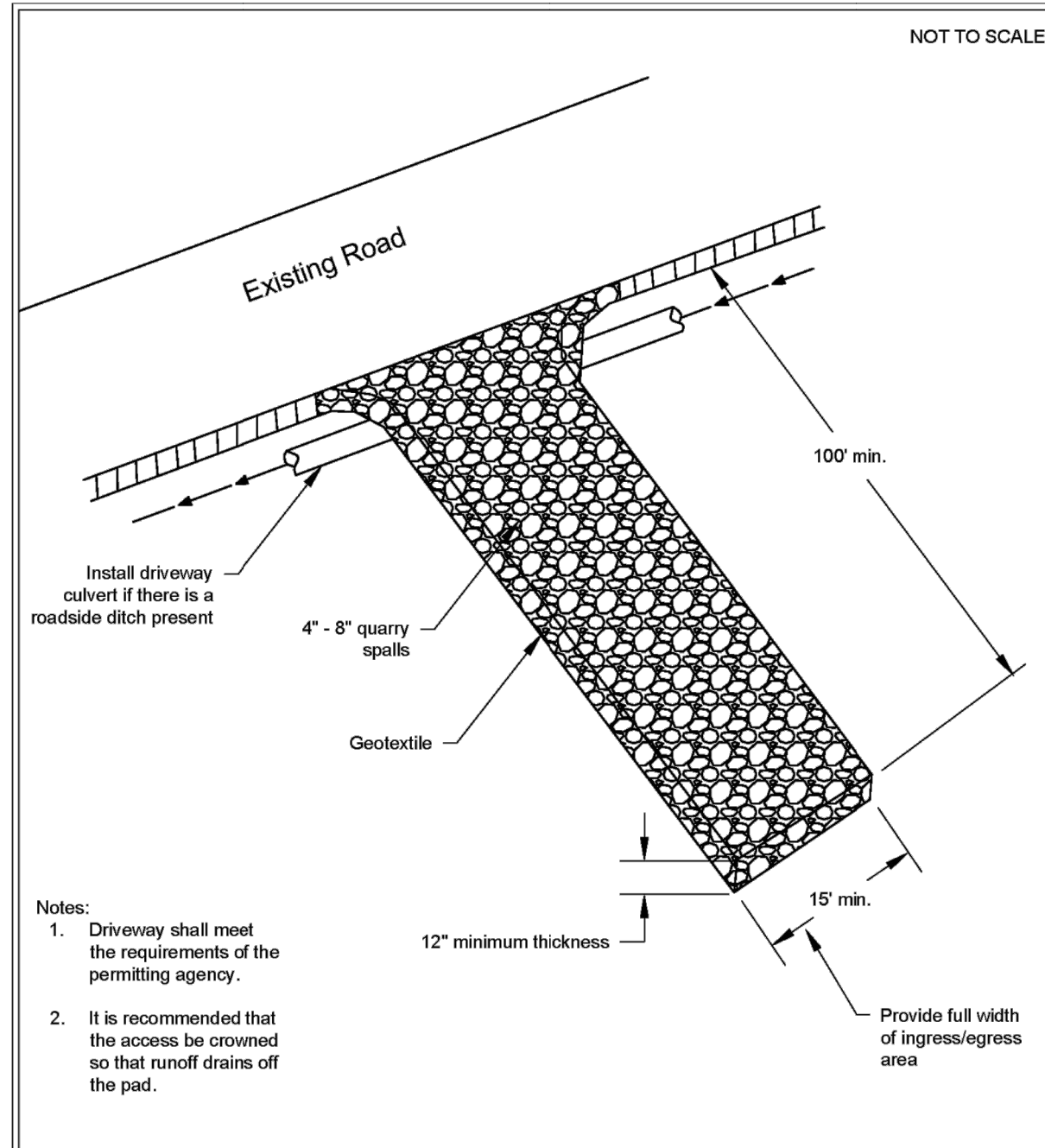


# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## T.E.S.C. NOTES + DETAILS

Figure II-3.1: Stabilized Construction Access



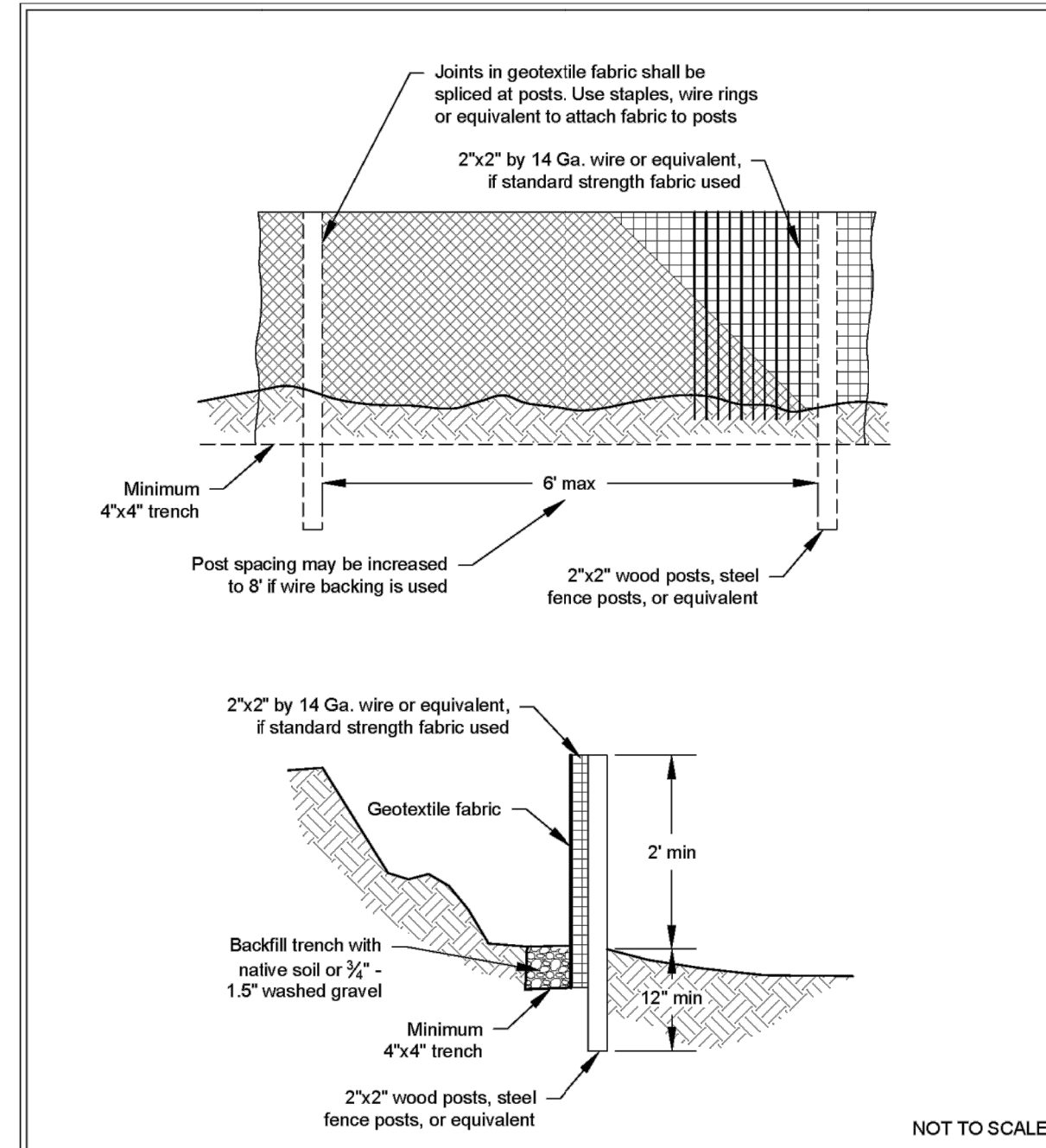
Stabilized Construction Access

Revised June 2018



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Figure II-3.22: Silt Fence



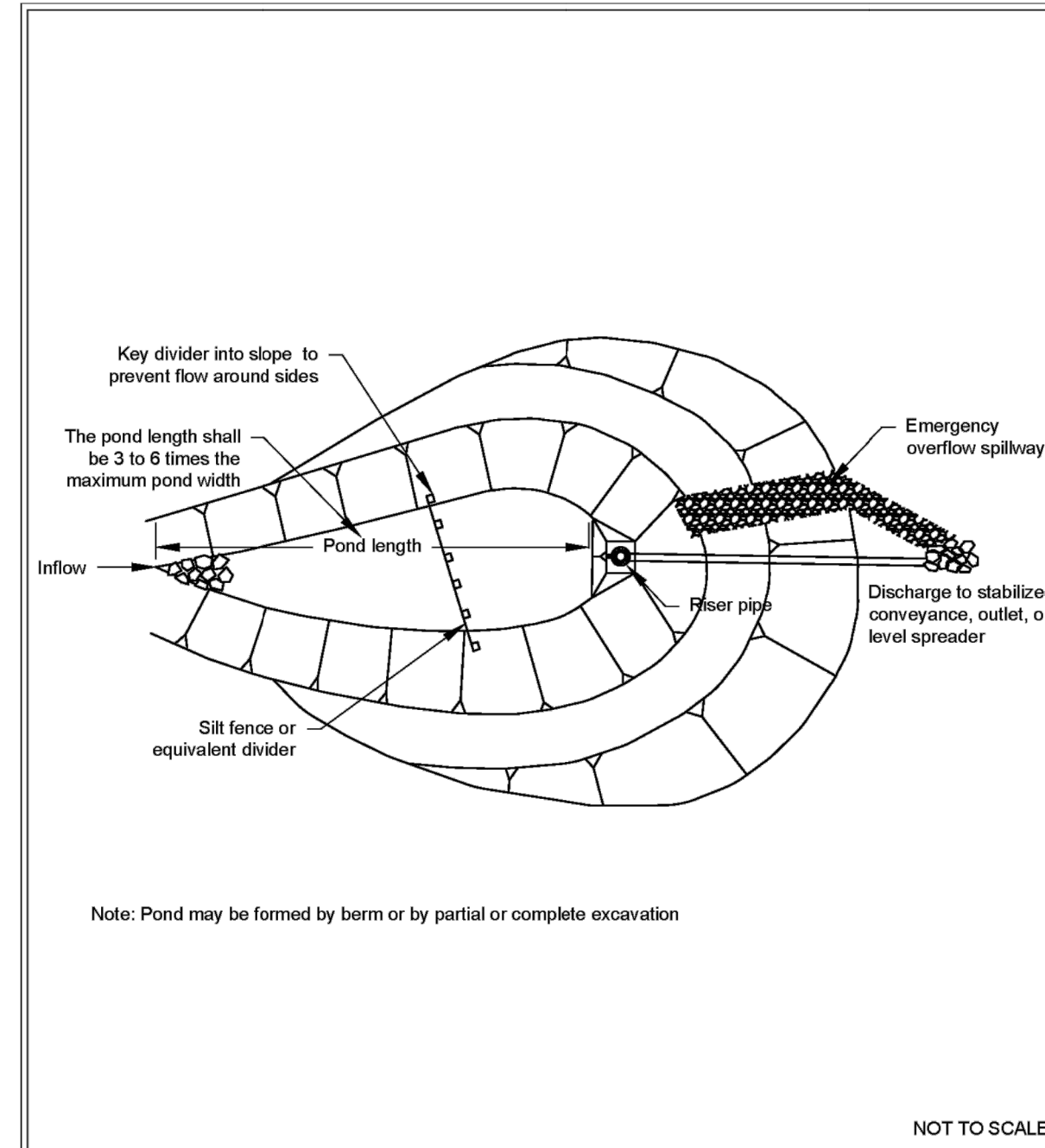
Silt Fence

Revised July 2017



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Figure II-3.28: Sediment Pond Plan View



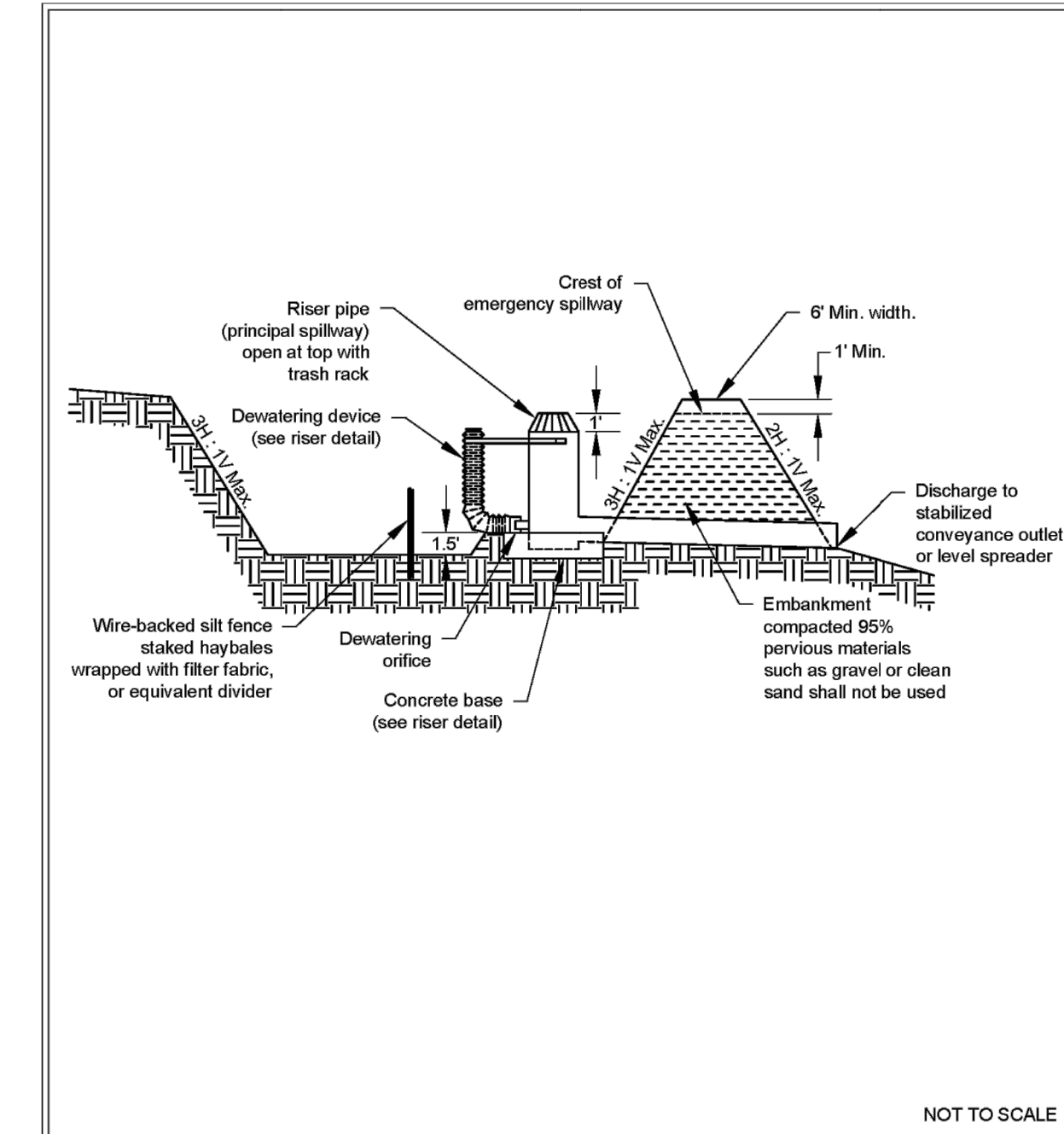
Sediment Pond Plan View

Revised June 2016



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Figure II-3.29: Sediment Pond Cross Section



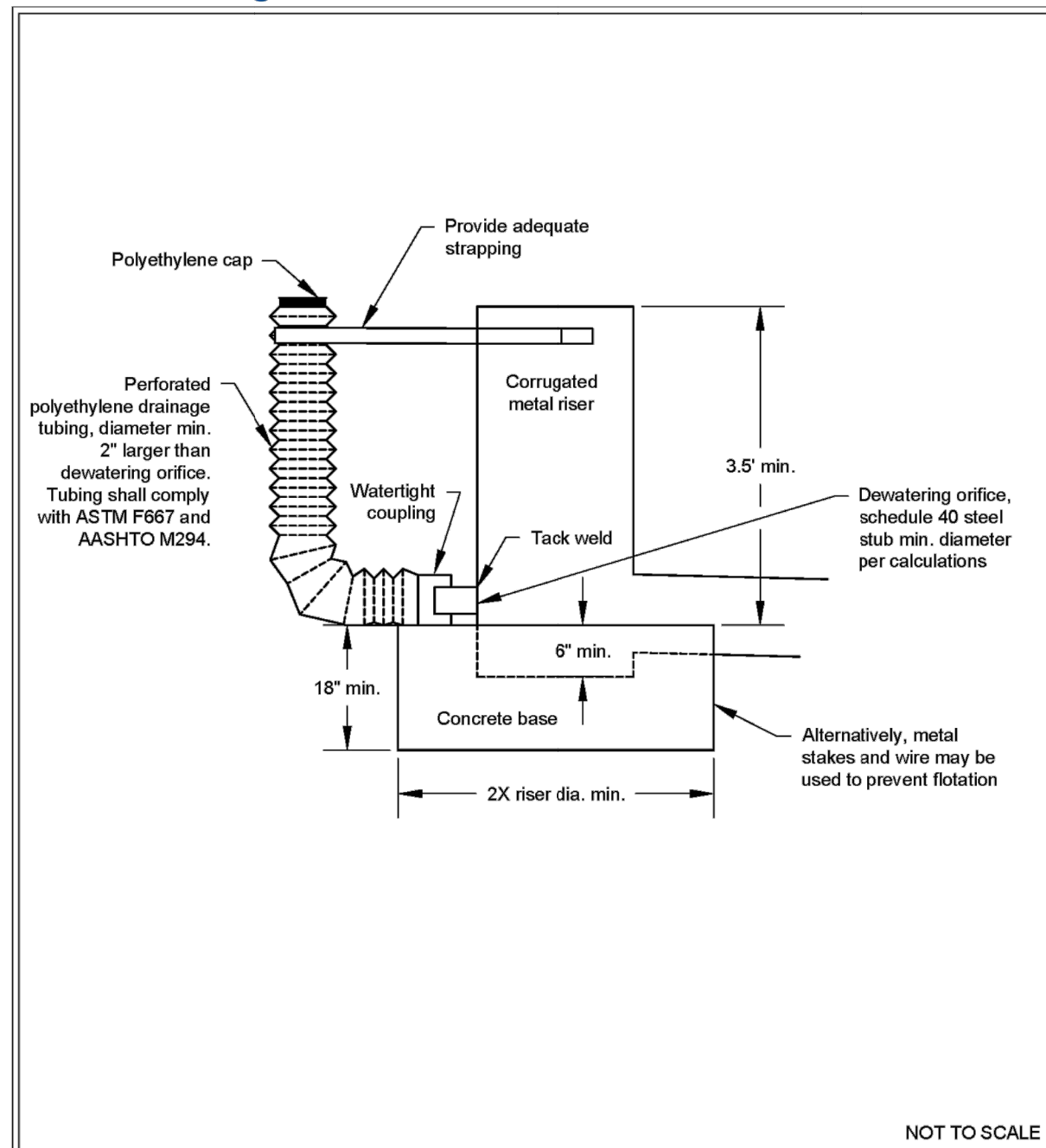
Sediment Pond Cross Section

Revised June 2016



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Figure II-3.30: Sediment Pond Riser Detail



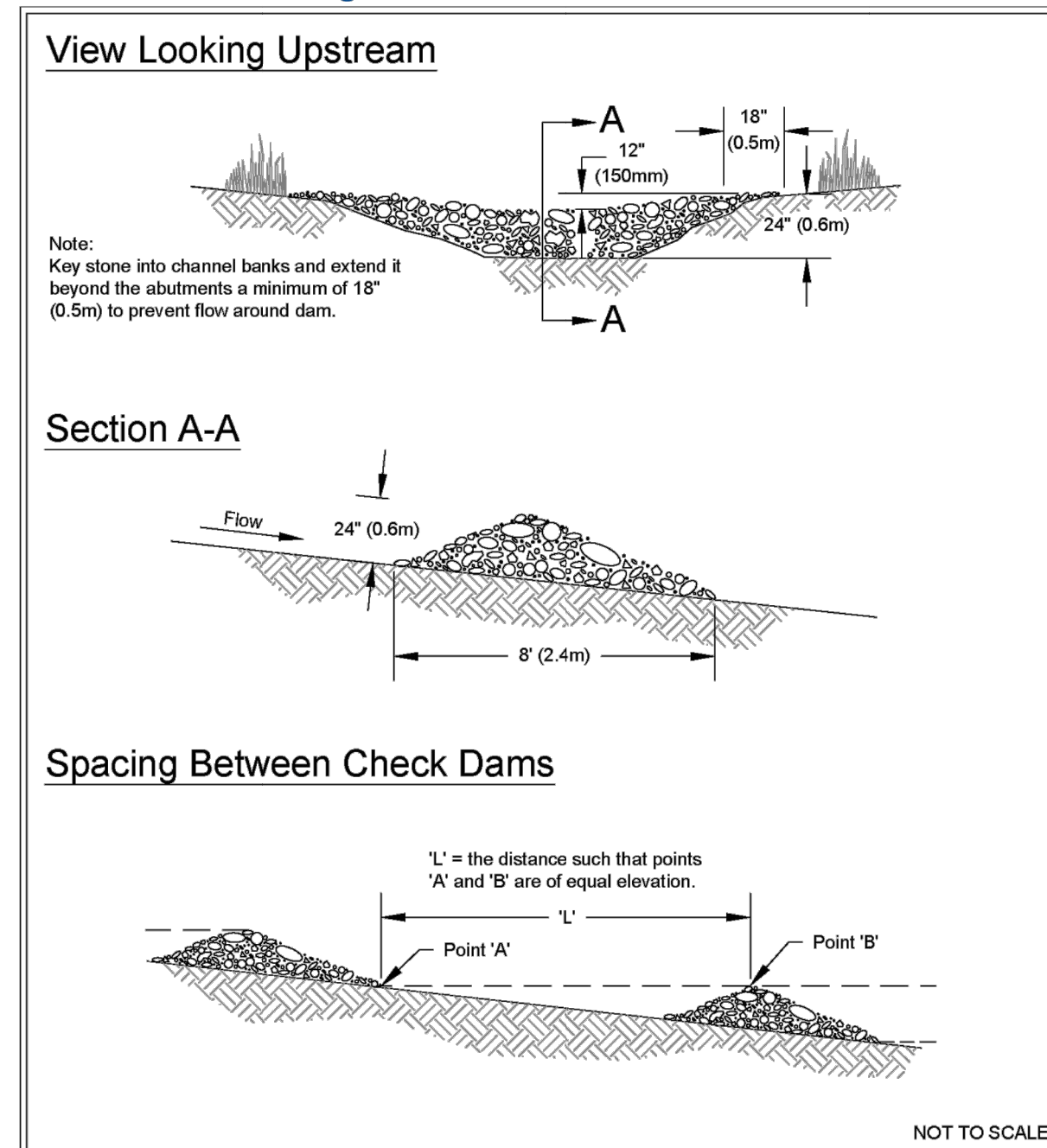
Sediment Pond Riser Detail

Revised June 2016



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Figure II-3.16: Rock Check Dam

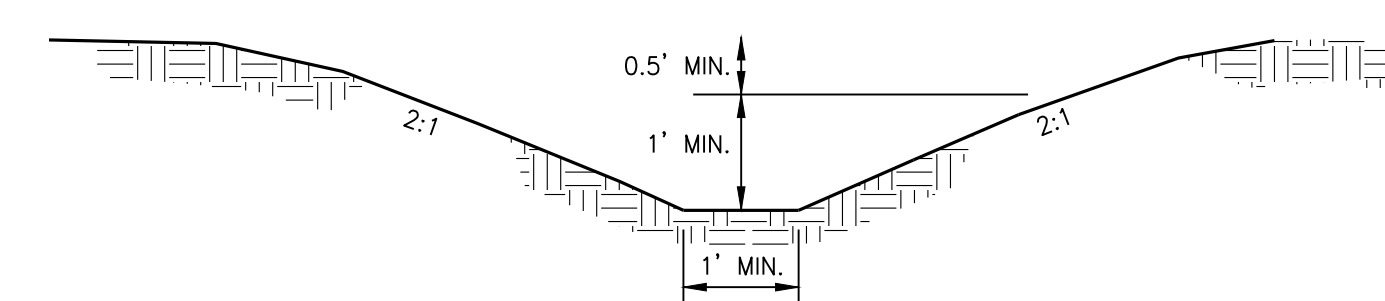


Rock Check Dam

Revised June 2016



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### DOE GENERAL TESC NOTES:

- APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES).
- THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC BMPs IS THE RESPONSIBILITY OF THE APPLICANT UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- CLEARLY FLAG THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT FOR THE DURATION OF CONSTRUCTION.
- CONSTRUCT THE ESC BMPs SHOWN ON THIS PLAN IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC BMPs SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE ESC BMPs AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- THE APPLICANT SHALL INSPECT THE ESC BMPs DAILY AND MAINTAIN THEM AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- INSPECT AND MAINTAIN THE ESC BMPs ON INACTIVE SITES A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT (I.E. A 24-HOUR STORM EVENT WITH A 10-YR OR GREATER RECURRENCE INTERVAL).
- AT NO TIME SHALL THE SEDIMENT EXCEED 60-PERCENT OF THE SUMP DEPTH OR HAVE LESS THAN 6-INCHES OF CLEARANCE FROM THE SEDIMENT SURFACE TO THE INVERT OF THE LOWEST PIPE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE

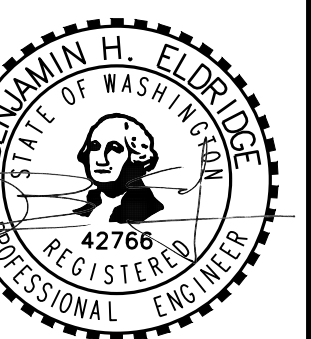
APPROVAL EXPIRES

Revision No. Date By Ctd. Appr.

T.E.S.C. NOTES + DETAILS  
FOR  
CHEHALIS INDUSTRIAL PARK

PUGET WESTERN, INC.  
2000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011

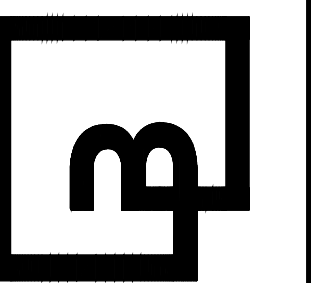
For:



Scale: Horizontal N/A Vertical N/A

Designed: SZG Drawn: SZG Checked: BHE Approved: BHE Date: 9/22/21

Barghausen Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

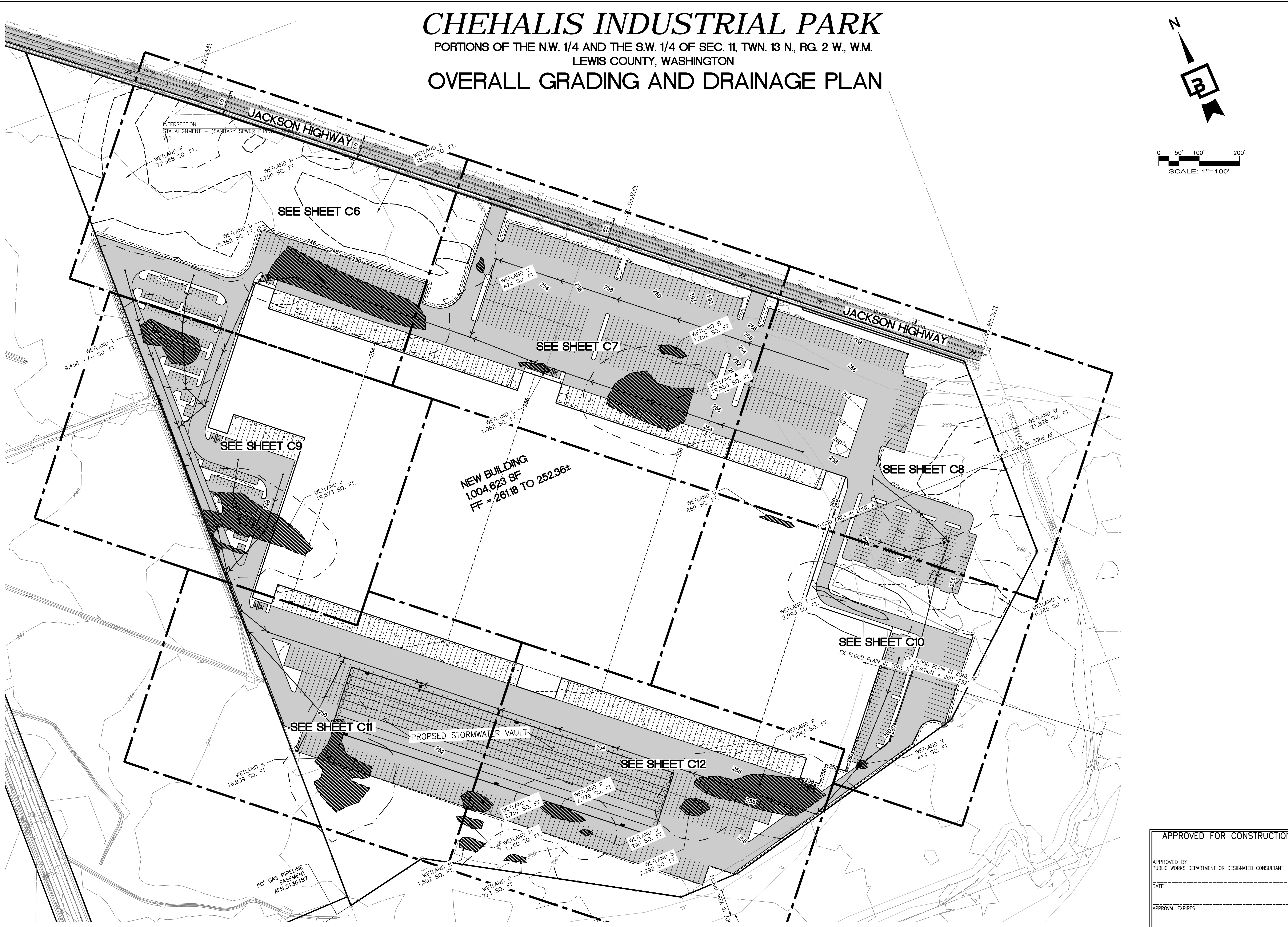
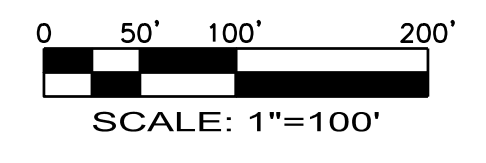
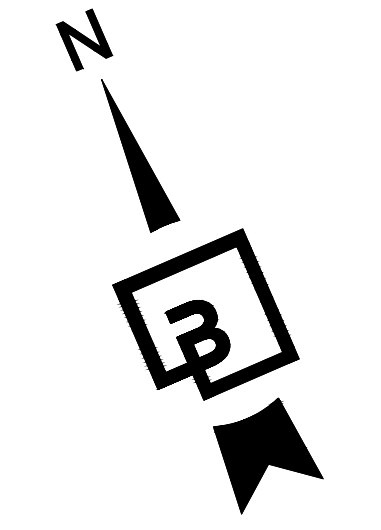


Job Number 14030  
Sheet C4 of 16

# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## OVERALL GRADING AND DRAINAGE PLAN



|     |      |    |      |       |
|-----|------|----|------|-------|
| No. | Date | By | Ctd. | Appr. |
|     |      |    |      |       |

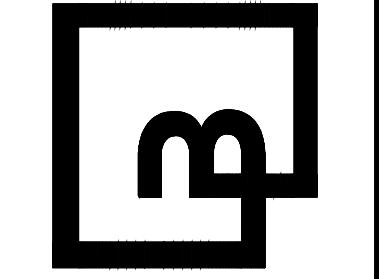
Title: **OVERALL GRADING AND DRAINAGE PLAN**  
FOR  
**CHEHALIS INDUSTRIAL PARK**

For:  
**PUGET WESTERN, INC.**  
2000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011



|          |            |           |          |     |
|----------|------------|-----------|----------|-----|
| Scale:   | Horizontal | 1" = 100' | Vertical | N/A |
| Designed | SGZ        |           | Checked  | BHE |
| Drawn    | SGZ        |           | Approved | BHE |
| Date     | 9/22/21    |           |          |     |

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)



**APPROVED FOR CONSTRUCTION**

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

Job Number  
**14030**

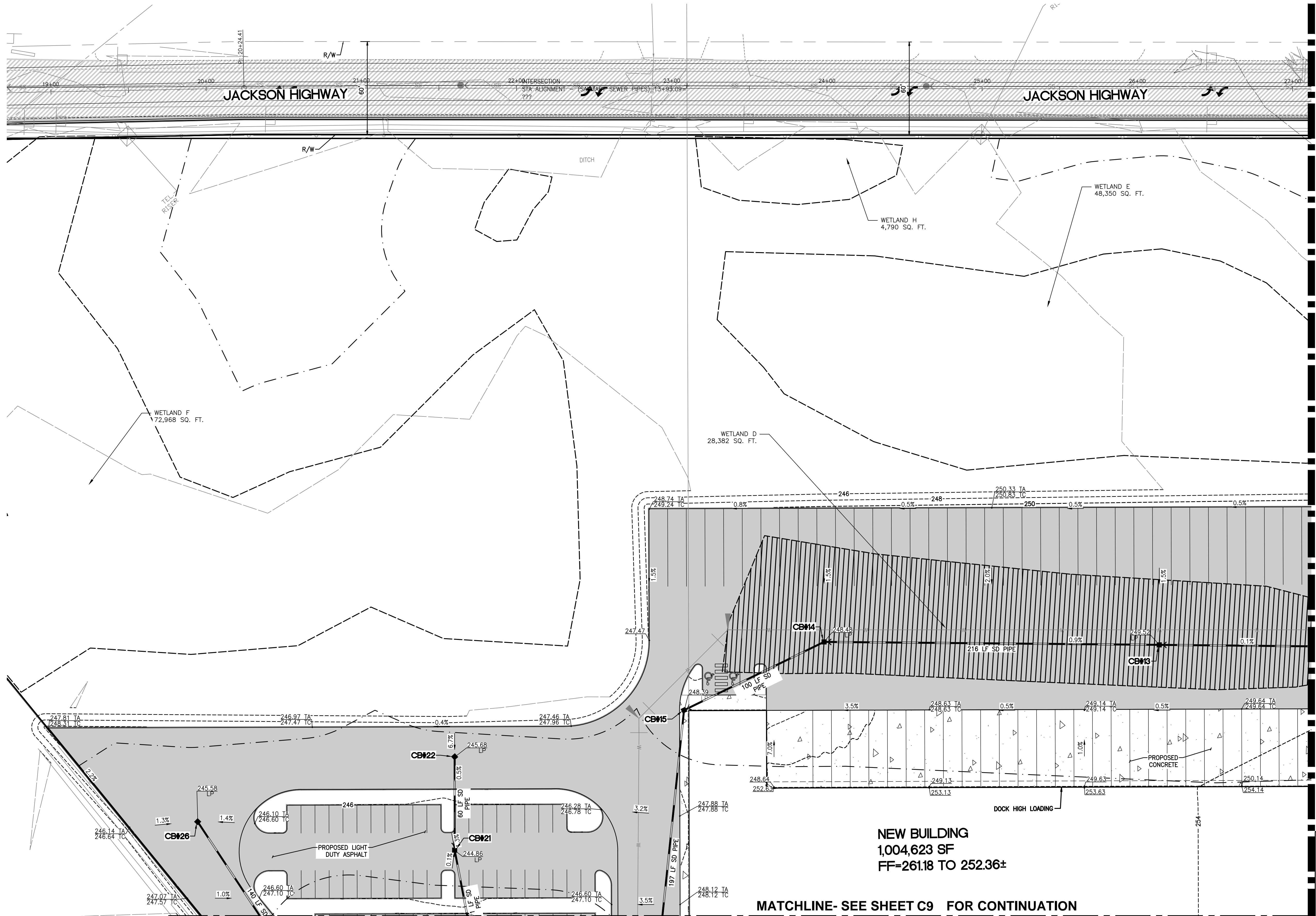
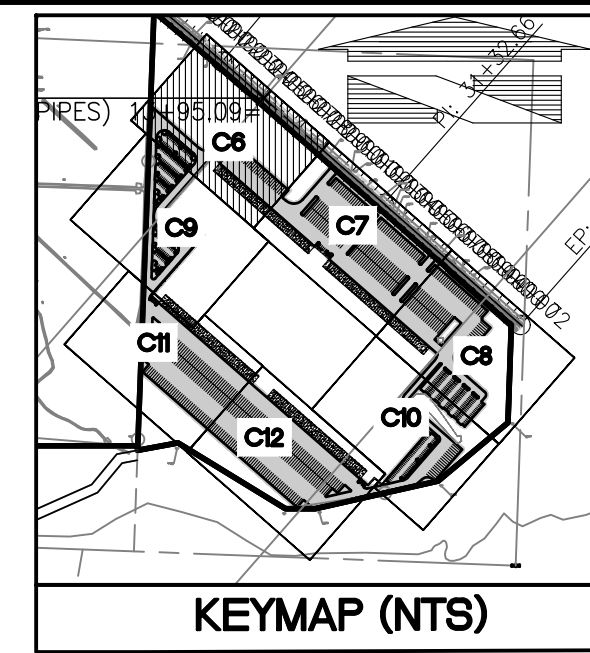
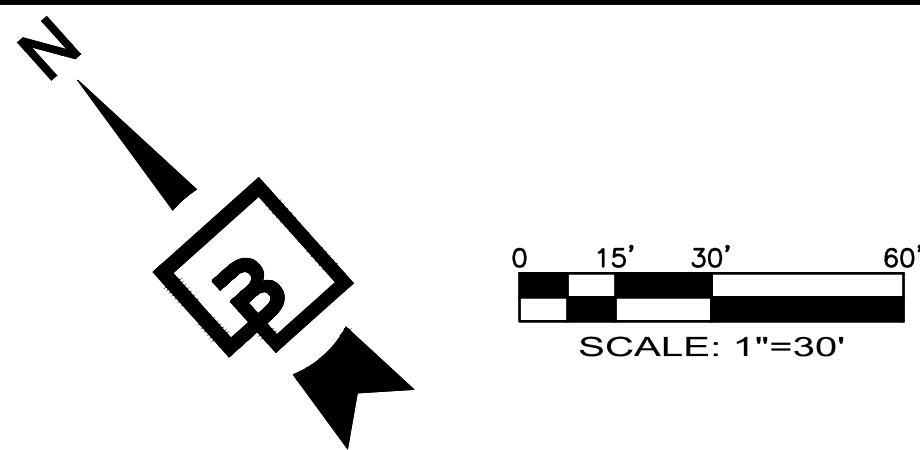
Sheet  
**C5** of **16**

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# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN



MATCHLINE - SEE SHEET C7 FOR CONTINUATION

MATCHLINE - SEE SHEET C9 FOR CONTINUATION

| CATCH BASIN |  |
|-------------|--|
| TABLE       |  |
| CB#13       | TYPE 1 W/ STANDARD GRATE<br>RIM = 249.52<br>IE=245.44 (12" SE)<br>IE=245.44 (12" NW) |
| CB#14       | TYPE 1 W/ STANDARD GRATE<br>RIM = 248.48<br>IE=244.36 (12" SE)<br>IE=244.36 (12" W)  |
| CB#15       | TYPE 1 W/ STANDARD GRATE<br>RIM = 248.38<br>IE=243.86 (12" E)<br>IE=243.86 (12" SW)  |
| CB#21       | TYPE 1 W/ STANDARD GRATE<br>RIM = 244.85<br>IE=241.56 (12" NE)<br>IE=241.95 (12" SW) |
| CB#22       | TYPE 1 W/ STANDARD GRATE<br>RIM = 245.69<br>IE=242.39 (12" SW)                       |
| CB#26       | TYPE 1 W/ STANDARD GRATE<br>RIM = 245.58<br>IE=242.52 (12" S)                        |

**NEW BUILDING**  
1,004,623 SF  
FF=261.18 TO 252.36±

**APPROVED FOR CONSTRUCTION**

APPROVED BY \_\_\_\_\_  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

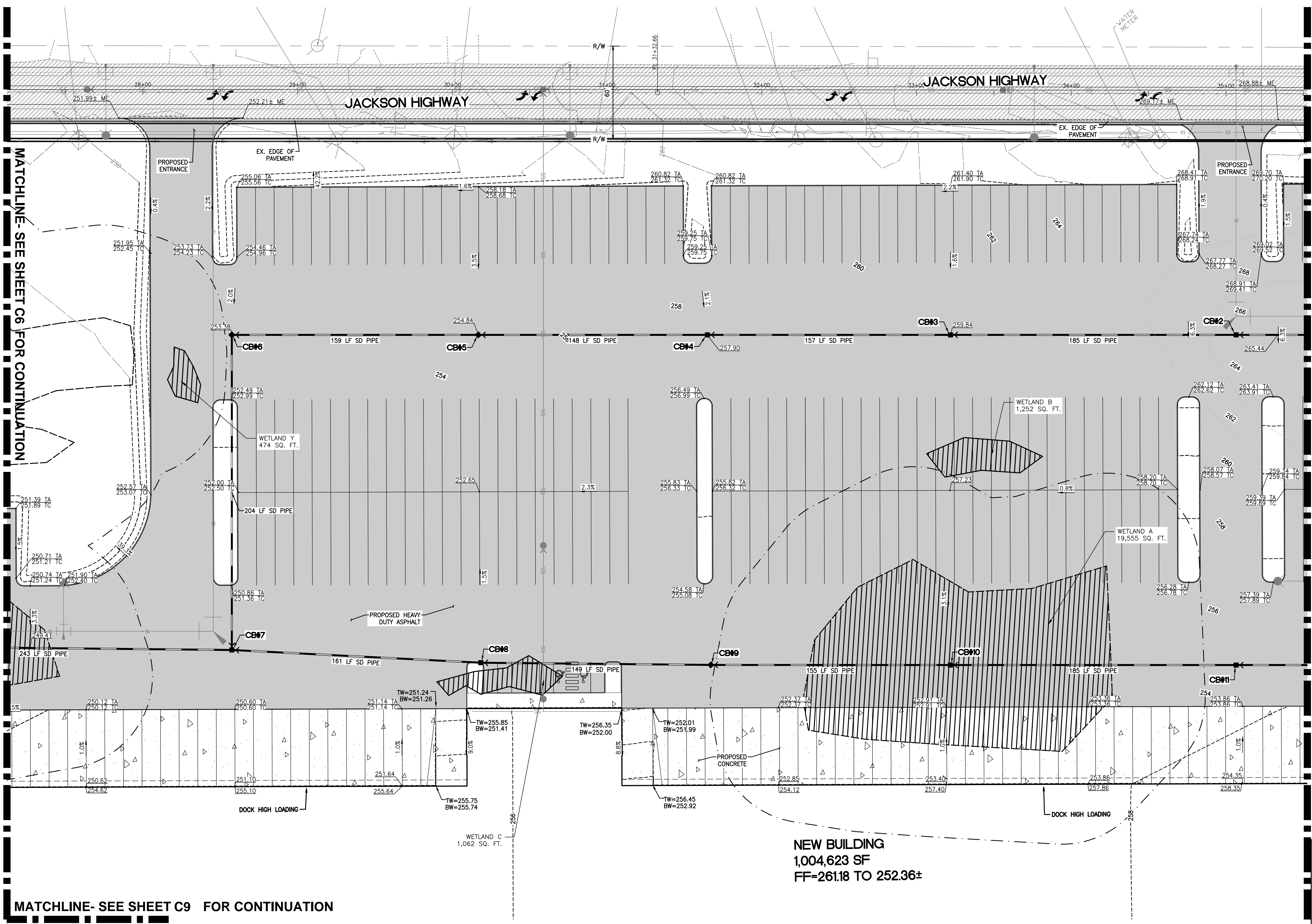
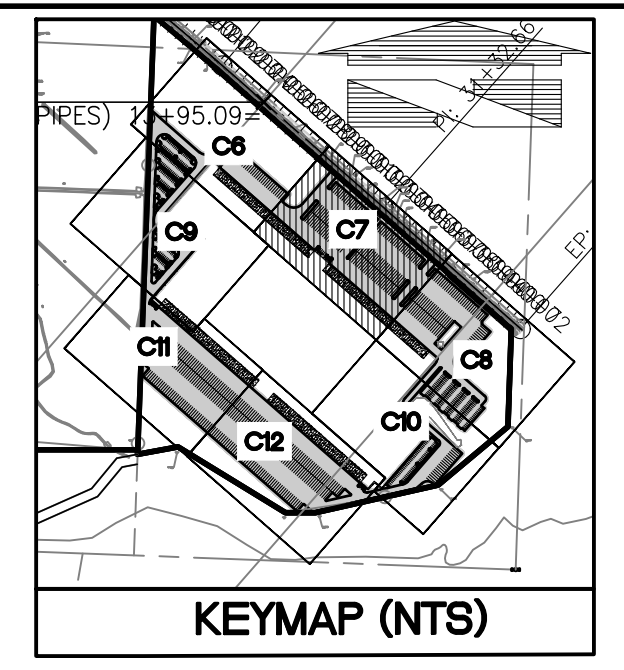
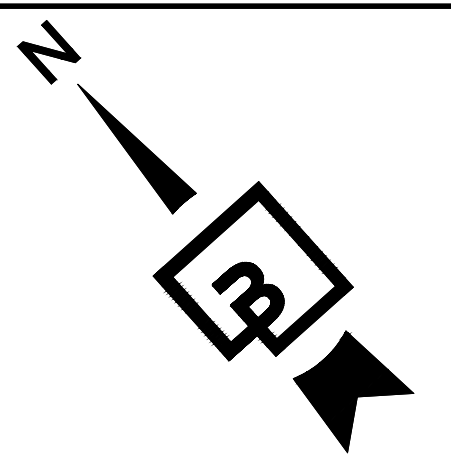
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|--|--|--|
| Title:<br>No. _____<br>Date _____<br>By _____<br>Ckd. _____<br>Appr. _____   | <b>GRADING AND DRAINAGE PLAN</b><br><br>FOR<br><b>CHEHALIS INDUSTRIAL PARK</b> | Revision<br>No. _____<br>Date _____<br>By _____<br>Ckd. _____<br>Appr. _____ |
| For:<br><b>PUGET WESTERN, INC.</b><br>20000 N CREEK PARKWAY<br>BUILDING H<br>BOTHELL, WA 98011   |  |  |
|  |  |  |
| Scale:<br>Horizontal 1"=30'<br>Vertical N/A  | Designed: SGZ<br>Drawn: SGZ<br>Checked: BHE<br>Approved: BHE<br>Date: 9/22/21  | Job Number:<br><b>14030</b>  |
| <b>Barghausen Consulting Engineers, Inc.</b><br>18215 72nd Avenue South<br>Kent, WA 98032<br>425.251.6222 <a href="http://barghausen.com">barghausen.com</a> |  | Sheet:<br><b>C6</b> of <b>16</b>   |

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# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN



MATCHLINE- SEE SHEET C6 FOR CONTINUATION

MATCHLINE- SEE SHEET C8 FOR CONTINUATION

MATCHLINE- SEE SHEET C9 FOR CONTINUATION

| CATCH BASIN  |  |
|--|--|
| TABLE  |  |
| CB#2 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 264.90<br>IE=260.17 (12" SE)<br>IE=260.17 (12" NW)                       |  |
| CB#3 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 259.84<br>IE=256.48 (12" SE)<br>IE=256.48 (12" NW)                       |  |
| CB#4 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 257.91<br>IE=254.86 (12" SE)<br>IE=254.86 (12" NW)                       |  |
| CB#5 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 254.84<br>IE=251.48 (12" SE)<br>IE=251.48 (12" NW)                       |  |
| CB#6 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 253.38<br>IE=250.33 (12" SE)<br>IE=250.18 (12" SW)                       |  |
| CB#7 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 252.02<br>IE=246.52 (12" NE)<br>IE=246.66 (12" SE)<br>IE=246.66 (12" NW) |  |
| CB#8 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 250.96<br>IE=247.61 (12" SE)<br>IE=247.61 (12" NW)                       |  |
| CB#9 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 253.01<br>IE=249.70 (12" SE)<br>IE=249.70 (12" NW)                       |  |
| CB#10 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 253.75<br>IE=250.62 (12" SE)<br>IE=250.51 (12" NW)                      |  |
| CB#11 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 254.94<br>IE=251.54 (12" SE)<br>IE=251.54 (12" NW)                      |  |

**NEW BUILDING**  
1,004,623 SF  
FF=261.18 TO 252.36±

**APPROVED FOR CONSTRUCTION**

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

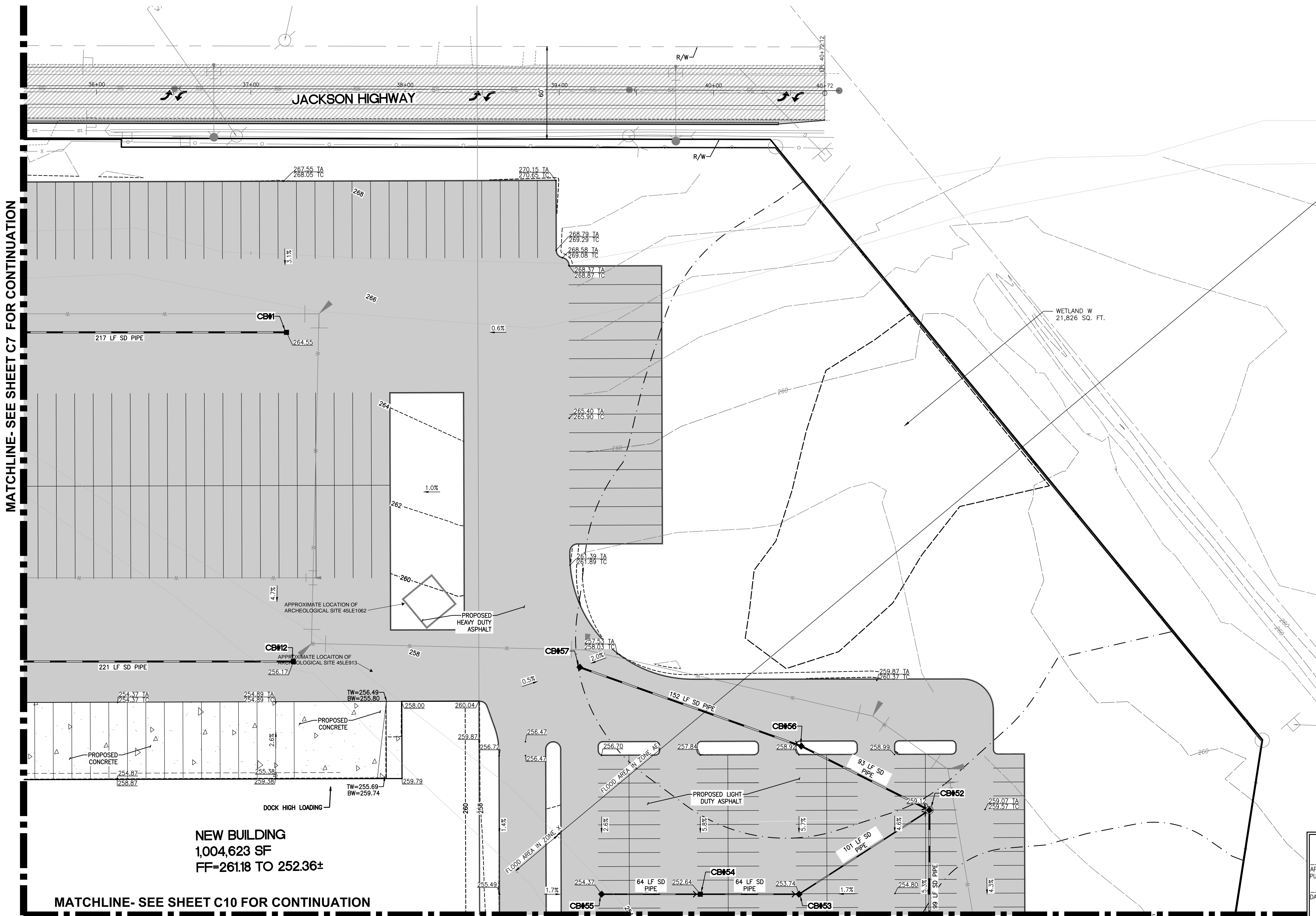
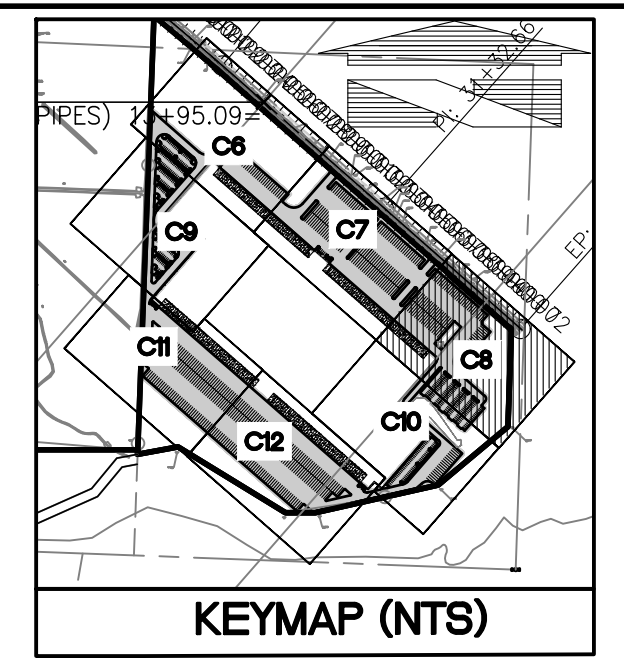
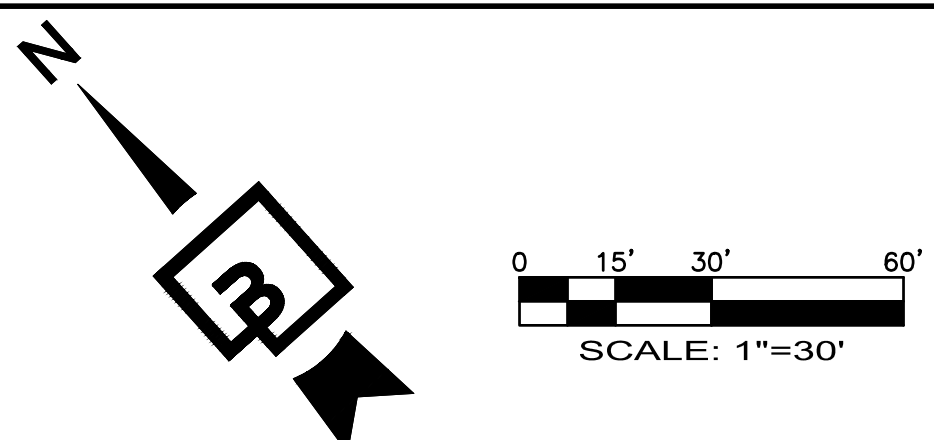
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| Revision   |  | By         |  | Ckd.     |  | Appr.    |  | No.   |  |
| <p style="text-align: center;"><b>Title:</b><br/>GRADING AND DRAINAGE PLAN<br/>FOR<br/>CHEHALIS INDUSTRIAL PARK</p>  |  |            |  |          |  |          |  |       |  |
| <p style="text-align: center;"><b>For:</b><br/>PUGET WESTERN, INC.<br/>20000 N CREEK PARKWAY<br/>BUILDING H<br/>BOTHELL, WA 98011</p>  |  |            |  |          |  |          |  |       |  |
|  |  |            |  |          |  |          |  |       |  |
| Scale:   |  | Horizontal |  | 1"=30'   |  | Vertical |  | N/A   |  |
| Designed   |  | SGZ        |  | SGZ      |  | Checked  |  | BHE.  |  |
| Date   |  | 9/22/21    |  | Approved |  | BHE.     |  | Date  |  |
| <p style="text-align: center;"><b>Barghausen Consulting Engineers, Inc.</b><br/>18215 72nd Avenue South<br/>Kent, WA 98032<br/>425.251.6222 <a href="http://barghausen.com">barghausen.com</a></p> |  |            |  |          |  |          |  |       |  |
| Job Number   |  | 14030      |  | Sheet    |  | C7       |  | of 16 |  |

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# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN



### CATCH BASIN

TABLE

|   |
|---|
| CB#1 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 264.55<br>IE=261.48 (12" NW)                            |
| CB#12 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 256.17<br>IE=253.12 (12" NW)                           |
| CB#52 TYPE 2 - 48"<br>RIM = 259.11<br>IE=248.66 (12" N)<br>IE=248.66 (8" W)<br>IE=248.66 (12" SW) |
| CB#53 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 253.74<br>IE=249.16 (8" NW)<br>IE=249.16 (8" E)        |
| CB#54 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 252.64<br>IE=249.48 (8" NW)<br>IE=249.48 (8" SE)       |
| CB#55 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 254.37<br>IE=251.35 (8" SE)                            |
| CB#56 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 259.40<br>IE=252.84 (12" NW)<br>IE=252.84 (12" S)      |
| CB#57 TYPE 1 W/<br>STANDARD GRATE<br>RIM = 256.99<br>IE=253.60 (12" SE)                           |

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

MATCHLINE- SEE SHEET C7 FOR CONTINUATION

MATCHLINE- SEE SHEET C10 FOR CONTINUATION

**NEW BUILDING**  
1,004,623 SF  
FF=261.18 TO 252.36±

No. \_\_\_\_\_  
Date \_\_\_\_\_  
By \_\_\_\_\_  
Ckd. \_\_\_\_\_  
Appr. \_\_\_\_\_

**Revision**

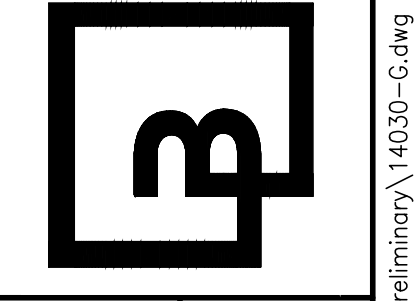
**For:**  
PUGET WESTERN, INC.  
20000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011



Scale:  
Horizontal 1"=30'  
Vertical N/A

Designed: \_\_\_\_\_  
Drawn: \_\_\_\_\_  
Checked: \_\_\_\_\_  
Approved: \_\_\_\_\_  
Date: 9/22/21

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



Job Number  
**14030**

Sheet  
**C8** of **16**

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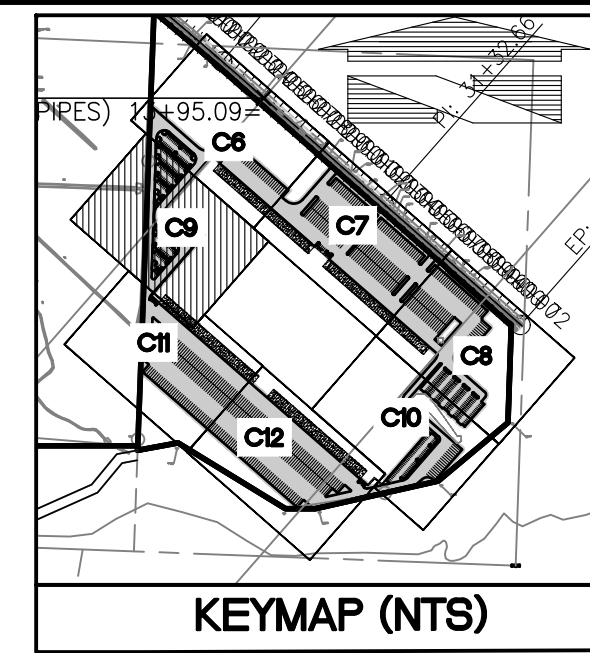
# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN

MATCHLINE- SEE SHEET C6 FOR CONTINUATION

MATCHLINE- SEE SHEET C7 FOR CONTINUATION



| CATCH BASIN |  |
|-------------|--|
| TABLE       |  |
| CB#16       | TYPE 1 W/ STANDARD GRATE<br>RIM = 247.83<br>IE=242.88 (12" NE)<br>IE=242.88 (12" SW)           |
| CB#17       | TYPE 2 - 48"<br>RIM = 248.49<br>IE=241.00 (12" NW)<br>IE=239.97 (12" NE)<br>IE=241.00 (12" W)  |
| CB#18       | TYPE 2 - 48"<br>RIM = 246.82<br>IE=241.21 (12" N)<br>IE=241.21 (12" SE)                        |
| CB#19       | TYPE 2 - 48"<br>RIM = 245.67<br>IE=241.46 (12" S)  |
| CB#20       | TYPE 1 W/ STANDARD GRATE<br>RIM = 245.30<br>IE=241.71 (12" NE)<br>IE=241.71 (12" S)            |
| CB#23       | TYPE 2 - 48"<br>RIM = 247.70<br>IE=240.37 (12" E)<br>IE=240.06 (12" N)<br>IE=240.37 (12" S)    |
| CB#24       | TYPE 2 - 48"<br>RIM = 246.97<br>IE=240.97 (12" N)<br>IE=240.97 (12" S)                         |
| CB#25       | TYPE 1 W/ STANDARD GRATE<br>RIM = 246.63<br>IE=241.42 (12" N)<br>IE=241.42 (12" S)             |
| CB#27       | TYPE 2 - 48"<br>RIM = 247.51<br>IE=240.09 (12" N)<br>IE=240.09 (12" S)                         |
| CB#28       | TYPE 2 - 48"<br>RIM = 248.17<br>IE=239.45 (12" N)<br>IE=239.45 (12" S)                         |
| CB#29       | TYPE 2 - 48"<br>RIM = 249.66<br>IE=239.10 (12" NE)<br>IE=239.10 (12" N)<br>IE=239.10 (12" S)   |
| CB#30       | TYPE 2 - 48"<br>RIM = 248.80<br>IE=242.86 (12" NW)<br>IE=242.85 (12" NE)<br>IE=242.85 (12" SW) |
| CB#31       | TYPE 1 W/ STANDARD GRATE<br>RIM = 246.87<br>IE=243.18 (12" N)<br>IE=243.18 (12" SE)            |
| CB#32       | TYPE 1 W/ STANDARD GRATE<br>RIM = 246.55<br>IE=243.57 (12" NE)<br>IE=243.57 (12" S)            |
| CB#33       | TYPE 1 W/ STANDARD GRATE<br>RIM = 247.20<br>IE=245.32 (12" SW)                                 |
| CB#34       | TYPE 1 W/ STANDARD GRATE<br>RIM = 248.61<br>IE=244.96 (12" NE)<br>IE=244.96 (12" SW)           |
| CB#35       | TYPE 1 W/ STANDARD GRATE<br>RIM = 248.71<br>IE=245.36 (12" SW)                                 |
| CB#59       | TYPE 2 - 48"<br>RIM = 247.90<br>IE=241.00 (12" S)  |

MATCHLINE- SEE SHEET C11 FOR CONTINUATION

APPROVED FOR CONSTRUCTION

APPROVED BY \_\_\_\_\_  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

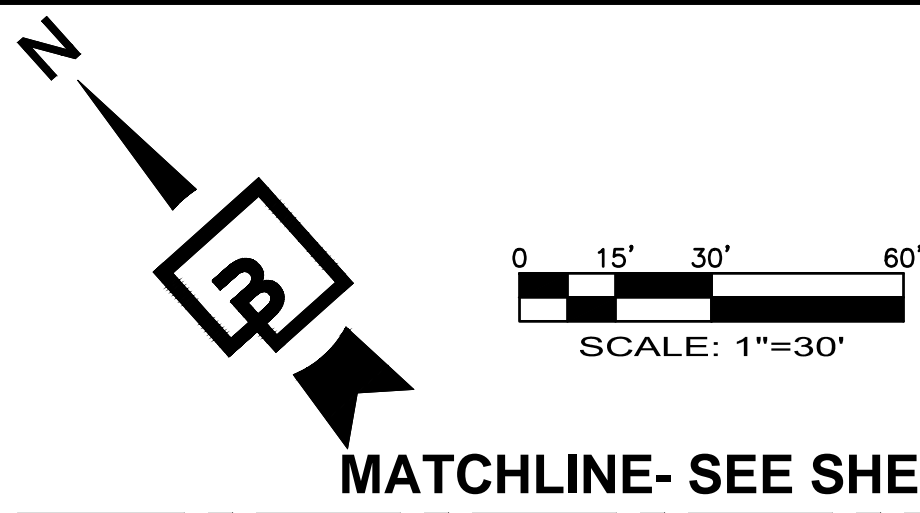
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|---|---------------------------------|
| Job Number<br><b>14030</b>  | Sheet<br><b>C9</b> of <b>16</b> |
| Title:<br><b>GRADING AND DRAINAGE PLAN</b><br>For:<br><b>PUGET WESTERN, INC.</b><br><b>20000 N CREEK PARKWAY</b><br><b>BUILDING H</b><br><b>BOTHELL, WA 98011</b> |                                 |
| Scale:<br>Horizontal: 1"=30'<br>Vertical: N/A   |                                 |
| Designed: _____<br>Drawn: _____<br>Checked: _____<br>Approved: _____<br>Date: 9/22/21   |                                 |
| For:<br><br><b>BENJAMIN H. BELORDIO</b><br>STATE OF WASHINGTON<br>LICENSE NO. 42766<br>PROFESSIONAL ENGINEER  |                                 |
| For:<br><b>Barghausen Consulting Engineers, Inc.</b><br>18215 72nd Avenue South<br>Kent, WA 98032<br>425.251.6222<br>barghausen.com                               |                                 |

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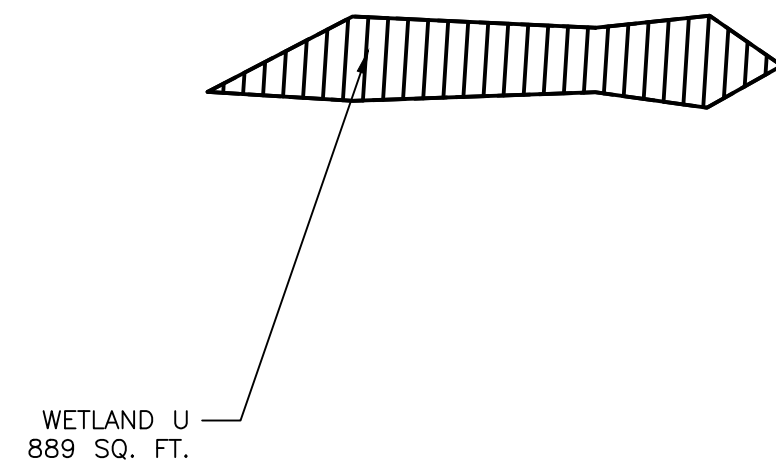
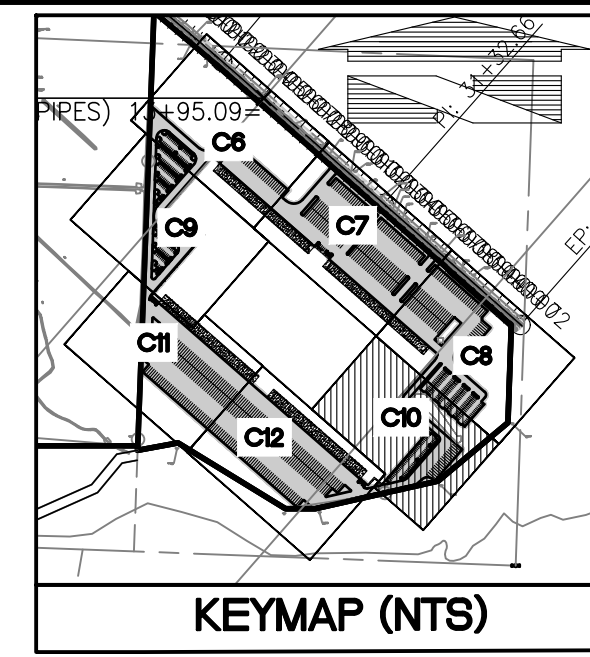
# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN

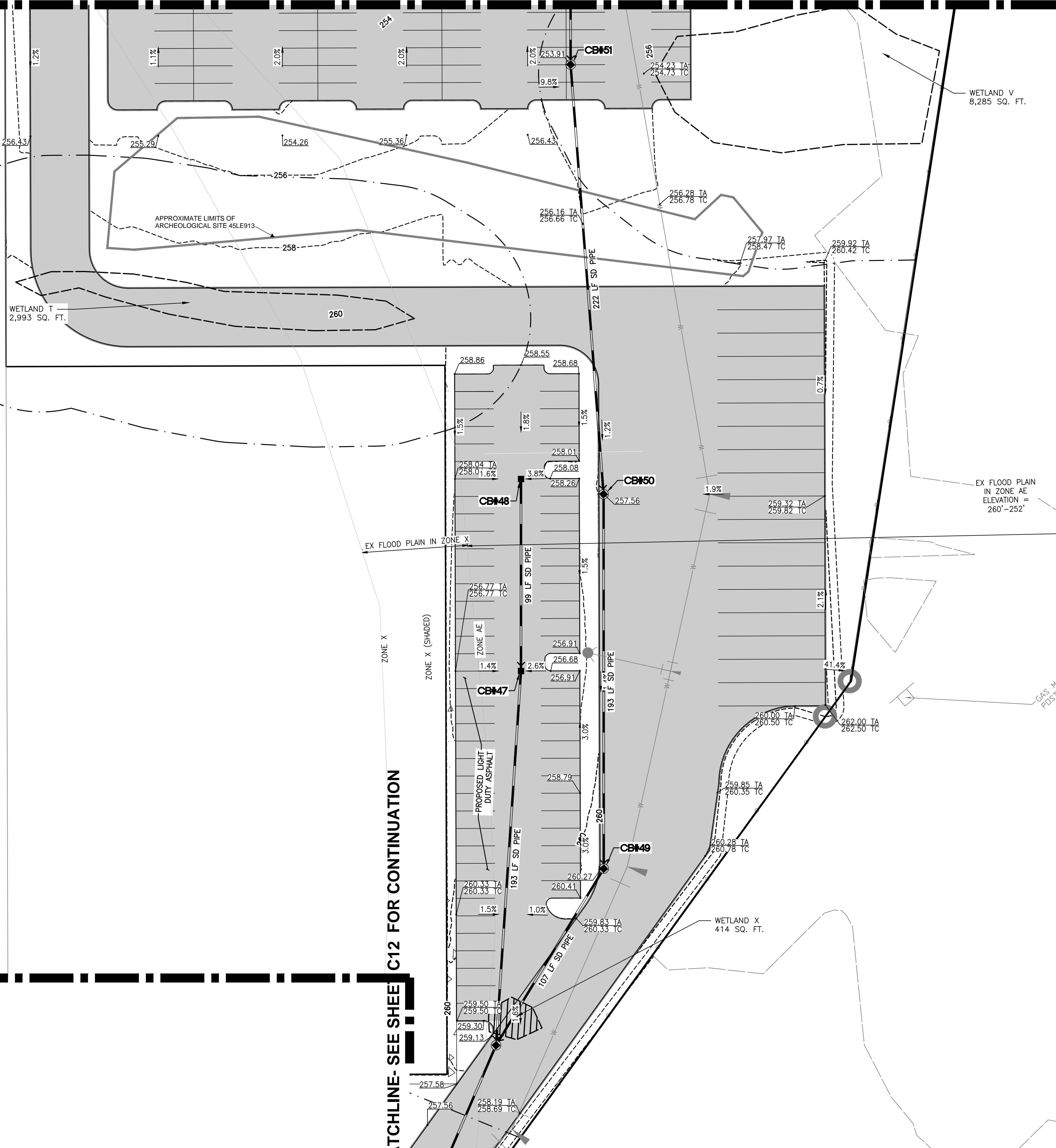


MATCHLINE- SEE SHEET C8 FOR CONTINUATION



WETLAND U  
689 SQ. FT.

NEW BUILDING  
1,004,623 SF  
FF=261.18 TO 252.36±



| CATCH BASIN                       |   |
|-----------------------------------|---|
| TABLE                             |   |
| CB#46 TYPE 2                      | RIM = 258.87<br>IE=245.55 (12" NE)<br>IE=245.55 (12" E)<br>IE=245.55 (12" SW) |
| CB#47 TYPE 1 W/<br>STANDARD GRATE | RIM = 256.29<br>IE=251.09 (12" NE)<br>IE=251.09 (12" SW)                      |
| CB#48 TYPE 1 W/<br>STANDARD GRATE | RIM = 257.51<br>IE=253.07 (12" SW)  |
| CB#49 TYPE 2 - 48"                | RIM = 260.30<br>IE=246.08 (12" NE)<br>IE=246.08 (12" W)                       |
| CB#50 TYPE 2 - 48"                | RIM = 257.55<br>IE=247.05 (12" NE)<br>IE=247.05 (12" SW)                      |
| CB#51 TYPE 2 - 48"                | RIM = 253.91<br>IE=248.16 (12" NE)<br>IE=248.16 (12" SW)                      |

MATCHLINE- SEE SHEET C12 FOR CONTINUATION

MATCHLINE- SEE SHEET C12 FOR CONTINUATION

APPROVED FOR CONSTRUCTION

APPROVED BY \_\_\_\_\_  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

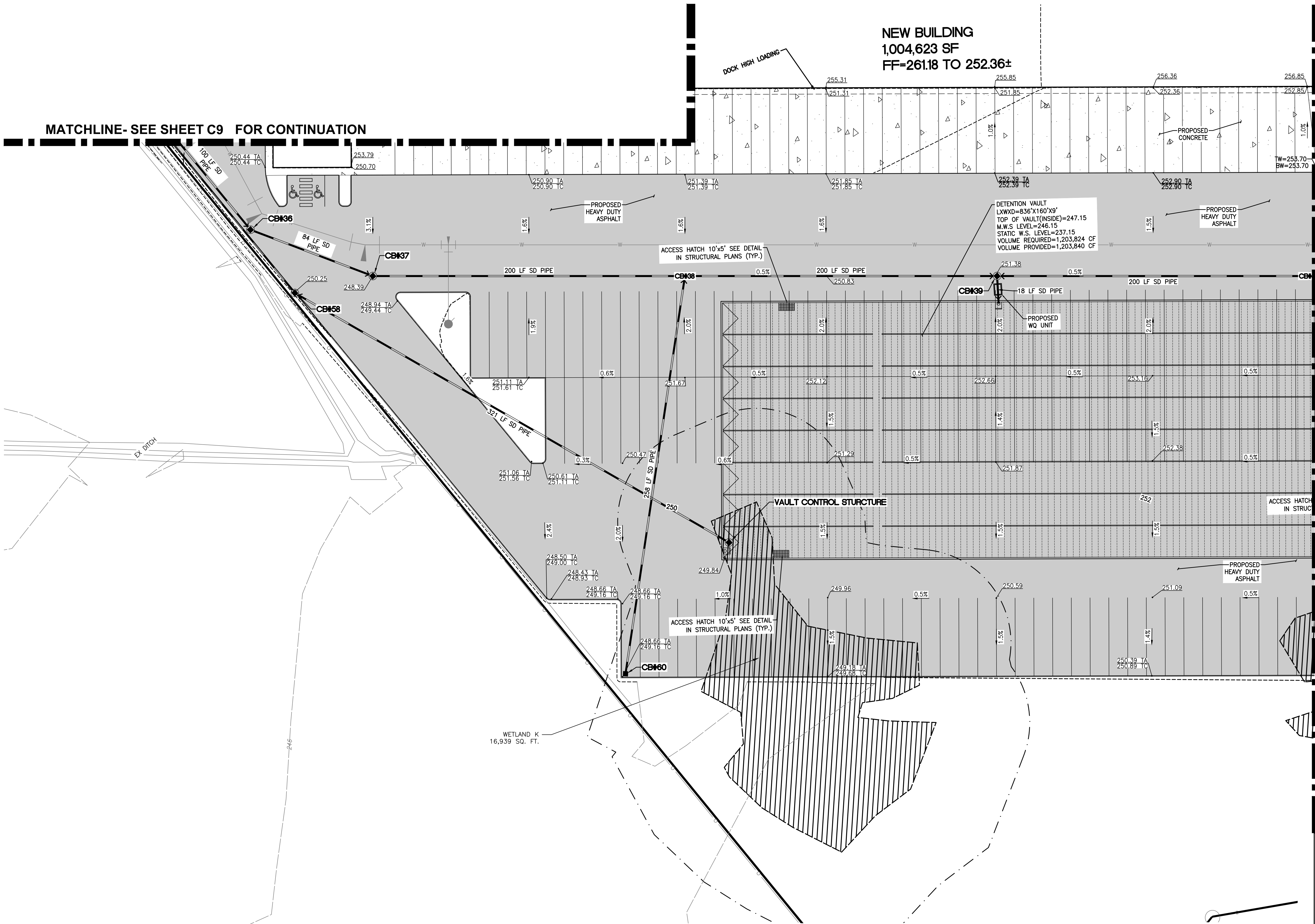
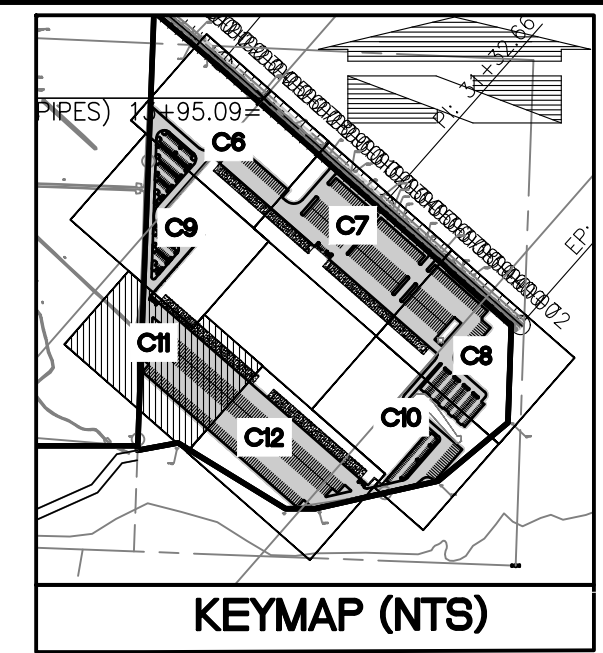
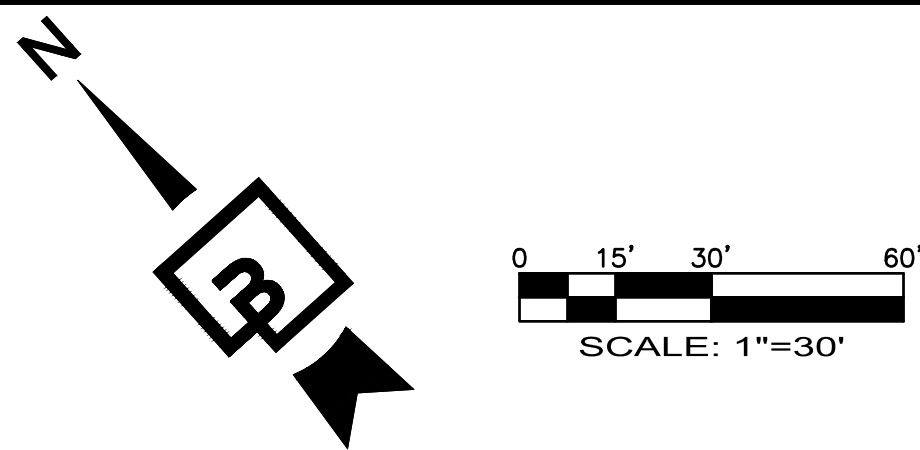
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|---|------------|----------|-----------|---------|-------|
| Revision  | No.        | Date     | By        | Clk.    | Appr. |
| Title: GRADING AND DRAINAGE PLAN  |            |          |           |         |       |
| For: PUGET WESTERN, INC.<br>20000 N CREEK PARKWAY<br>BUILDING H<br>BOTHELL, WA 98011  |            |          |           |         |       |
|   |            |          |           |         |       |
| Scale:  | Horizontal | Vertical |           |         |       |
|   | 1"=30'     | N/A      |           |         |       |
| Designed  | Drawn      | Checked  | Approved  | Date    |       |
| SGZ   | SGZ        | BHE      | BHE       | 9/22/21 |       |
| Barghausen Consulting Engineers, Inc.<br>18215 72nd Avenue South<br>Kent, WA 98032<br>425.251.6222 <a href="http://barghausen.com">barghausen.com</a> |            |          |           |         |       |
| Job Number  | 14030      | Sheet    | C10 of 16 |         |       |

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# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

## GRADING AND DRAINAGE PLAN



MATCHLINE- SEE SHEET C9 FOR CONTINUATION

MATCHLINE- SEE SHEET C12 FOR CONTINUATION

NEW BUILDING  
1,004,623 SF  
FF=261.18 TO 252.36±

DETECTION VAULT  
LXWXD=836"x160"x9'  
TOP OF VAULT(INSIDE)=247.15  
M.W.S LEVEL=237.15  
STATIC W.S. LEVEL=237.15  
VOLUME REQUIRED=1,203,824 CF  
VOLUME PROVIDED=1,203,840 CF

| CATCH BASIN                         |  |
|-------------------------------------|--|
| TABLE                               |  |
| CB#36 TYPE 2 - 48"                  | RIM = 250.45<br>IE=238.77 (12" N)<br>IE=238.77 (12" SE)                        |
| CB#37 TYPE 2 - 48"                  | RIM = 248.39<br>IE=238.49 (12" NW)<br>IE=238.49 (12" SE)                       |
| CB#38 TYPE 2 - 48"                  | RIM = 250.37<br>IE=237.82 (12" NW)<br>IE=240.00 (12" SW)<br>IE=237.82 (12" SE) |
| CB#39 TYPE 2 - 48"                  | RIM = 251.38<br>IE=237.15 (12" NW)<br>IE=237.15 (12" SE)<br>IE=237.15 (12" SW) |
| CB#40 TYPE 2 - 48"                  | RIM = 252.40<br>IE=240.65 (12" SE)<br>IE=241.40 (12" NW)                       |
| CB#58 TYPE 2 - 48" W/ A PUMP SYSTEM | RIM = 249.85<br>IE=235.38 (12" S)<br>IE=246.35 (12" N)                         |
| CB#60 TYPE 1, W/ STANDARD GRATE     | RIM = 248.67<br>IE=244.87 (12" NE)   |
| VAULT CONTROL STRUCTURE TYPE 2      | RIM = 250.04<br>IE=236.98 (12" N)  |

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE

APPROVAL EXPIRES

Revision  
No. Date By Ckd. Appr.

Title:  
GRADING AND DRAINAGE PLAN  
FOR  
CHEHALIS INDUSTRIAL PARK

For:  
PUGET WESTERN, INC.  
20000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011

Scale:  
Horizontal 1"=30'  
Vertical N/A

Designed: SGZ  
Drawn: SGZ  
Checked: BHE  
Approved: BHE  
Date: 9/22/21

Barghausen  
Consulting Engineers, Inc.  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com

Job Number  
14030

Sheet  
C11 of 16

PA:\4000a\14030\preliminary\14030-6.dwg 11/12/2021 12:08 PM BELORDICE



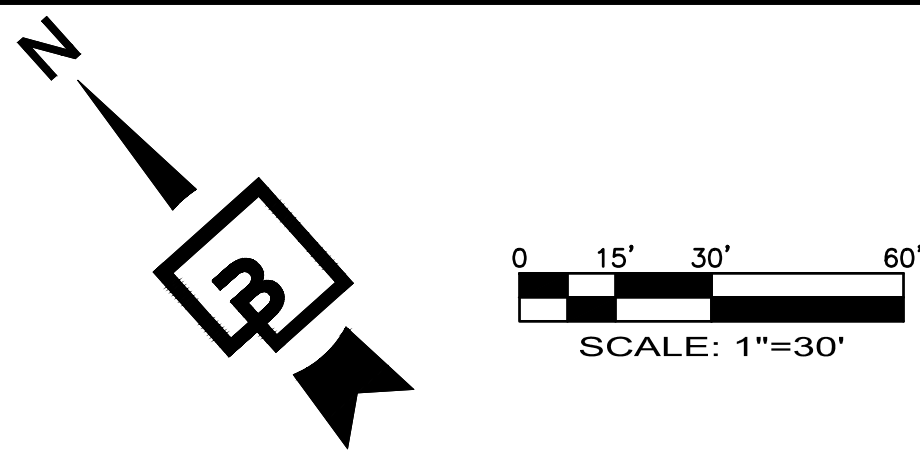
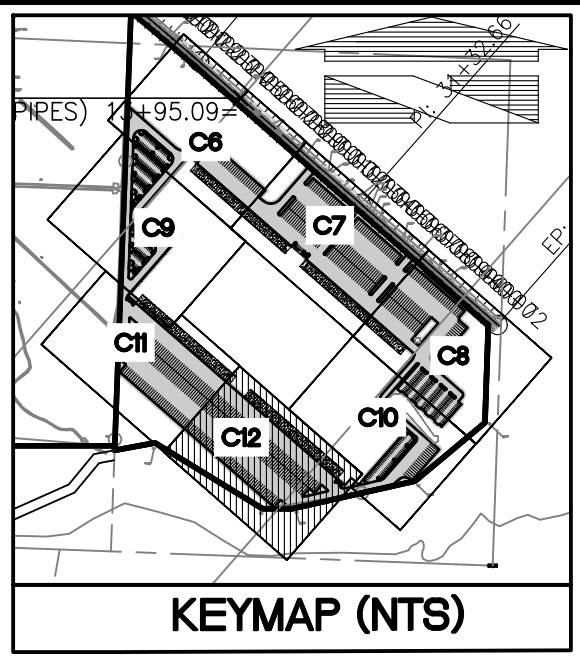
# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

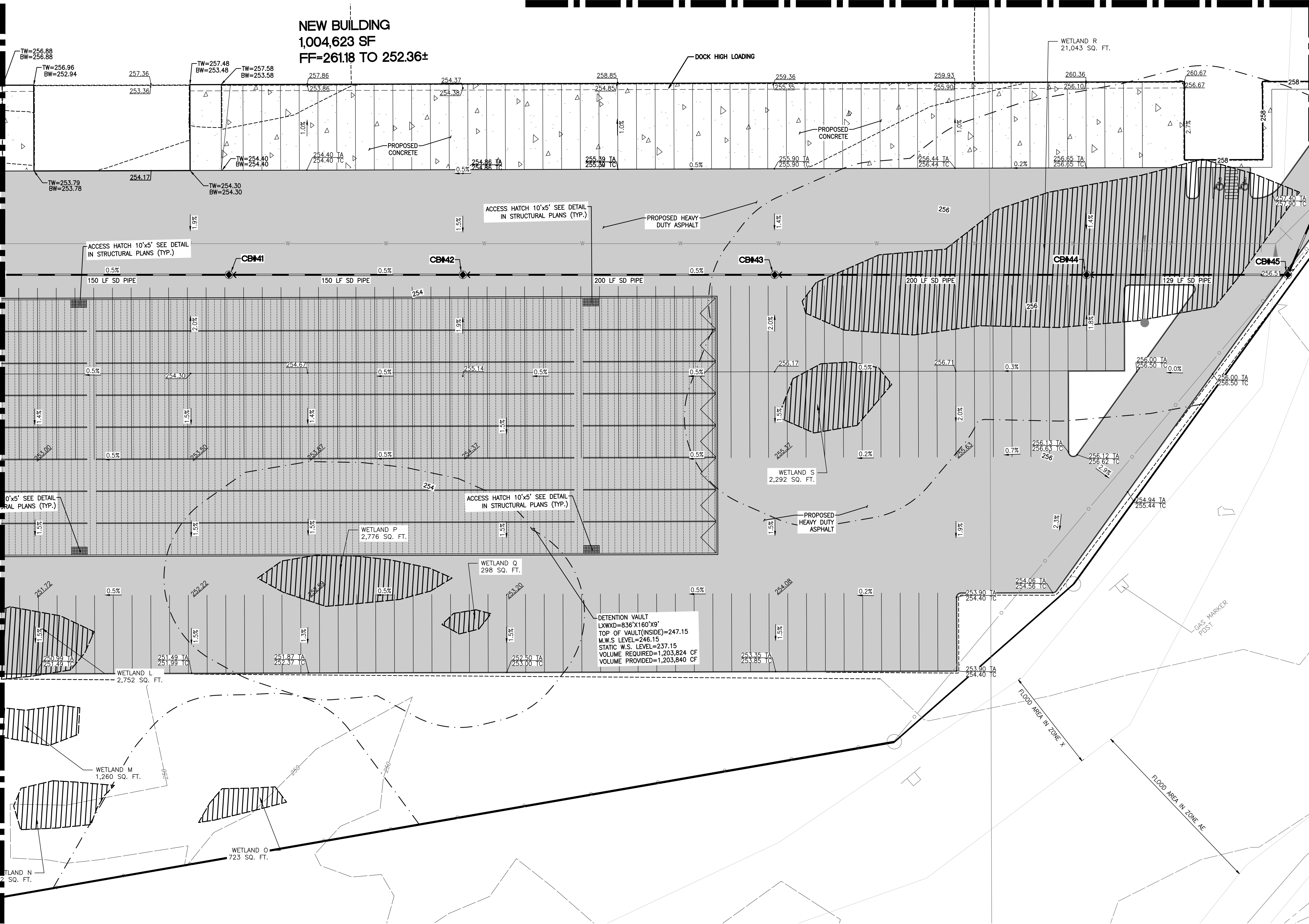
## GRADING AND DRAINAGE PLAN

MATCHLINE- SEE SHEET C10 FOR CONTINUATION

MATCHLINE- SEE SHEET C10 FOR CONTINUATION



MATCHLINE- SEE SHEET C11 FOR CONTINUATION



**CATCH BASIN**

TABLE

|                    |              |
|--------------------|--------------|
| CB#41              | TYPE 2 - 48" |
| RIM = 253.15       |              |
| IE=241.40 (12" SE) |              |
| IE=241.40 (12" NW) |              |
| CB#42              | TYPE 2 - 48" |
| RIM = 253.91       |              |
| IE=242.15 (12" SE) |              |
| IE=242.15 (12" NW) |              |
| CB#43              | TYPE 2 - 48" |
| RIM = 254.93       |              |
| IE=243.15 (12" SE) |              |
| IE=243.15 (12" NW) |              |
| CB#44              | TYPE 2 - 48" |
| RIM = 255.68       |              |
| IE=244.15 (12" SE) |              |
| IE=244.15 (12" NW) |              |
| CB#45              | TYPE 2 - 48" |
| RIM = 256.55       |              |
| IE=244.80 (12" NE) |              |
| IE=244.80 (12" NW) |              |

DETENTION VAULT  
LXWXD=836"x160"x9'  
TOP OF VAULT(INSIDE)=247.15  
M.W.S. LEVEL=246.15  
STATIC W.S. LEVEL=237.15  
VOLUME REQUIRED=1,203,824 CF  
VOLUME PROVIDED=1,203,840 CF

Revision  
No. Date By Ckd. Appr.  
Title: **GRADING AND DRAINAGE PLAN**  
FOR **CHEHALIS INDUSTRIAL PARK**

For: **PUGET WESTERN, INC.**  
**20000 N CREEK PARKWAY**  
**BUILDING H**  
**BOTHELL, WA 98011**



Scale: Horizontal 1"=30' Vertical N/A  
Designed: SGZ  
Drawn: SGZ  
Checked: BHE  
Approved: BHE  
Date: 9/22/21

**Barghausen Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222 [barghausen.com](http://barghausen.com)

Job Number: **14030**  
Sheet: **C12** of **16**

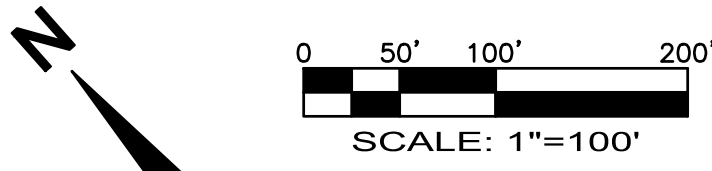
**APPROVED FOR CONSTRUCTION**  
APPROVED BY: PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT  
DATE: \_\_\_\_\_  
APPROVAL EXPIRES: \_\_\_\_\_

P:\14003a\14030\preliminary\14030-6.dwg 11/12/2021 12:08 PM BELORDICE

# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

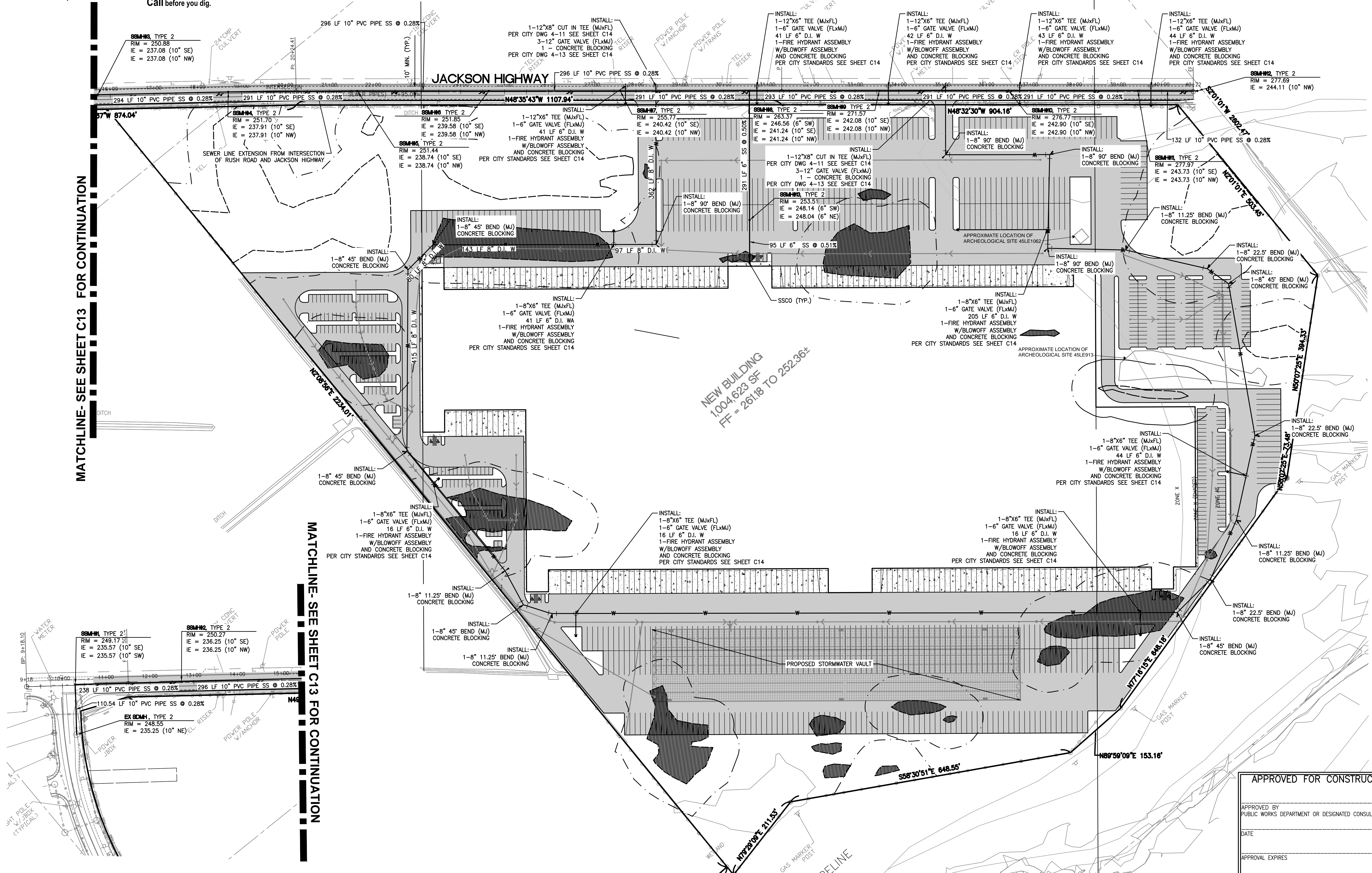
## UTILITY PLAN



Know what's below.  
Call before you dig.

MATCHLINE- SEE SHEET C13 FOR CONTINUATION

MATCHLINE- SEE SHEET C13 FOR CONTINUATION



NEW BUILDING  
1,004.623 SF  
FF = 261.18 TO 252.36±

APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

DATE \_\_\_\_\_

APPROVAL EXPIRES \_\_\_\_\_

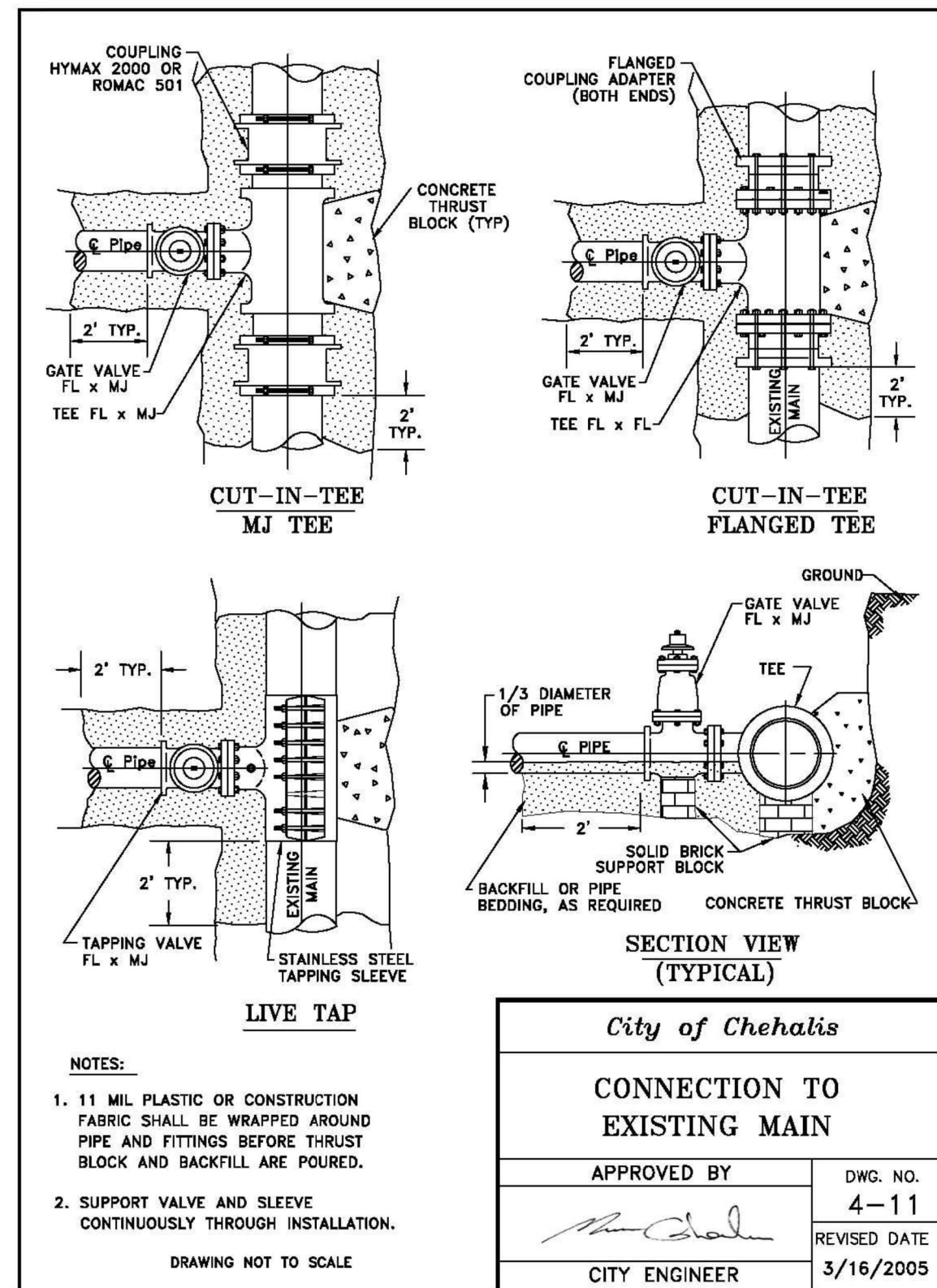
|  |       |       |              |
|--|-------|-------|--------------|
| Revision   |       | Title | UTILITY PLAN |
| No.  | Date  | By    | Ctd.         |
| Appr.  |       |       |              |
| <p>For: PUGET WESTERN, INC.<br/>20000 N CREEK PARKWAY<br/>BUILDING H<br/>BOTHELL, WA 98011</p>   |       |       |              |
|  |       |       |              |
| <p>Scale: Horizontal 1"=100' Vertical N/A</p>  |       |       |              |
| <p>Designed: SGZ<br/>Drawn: SGZ<br/>Checked: BHE<br/>Approved: BHE<br/>Date: 9/22/21</p>   |       |       |              |
| <p><b>Barghausen Consulting Engineers, Inc.</b><br/>18215 72nd Avenue South<br/>Kent, WA 98032<br/>425.251.6222 <a href="http://barghausen.com">barghausen.com</a></p> |       |       |              |
| Job Number   | 14030 | Sheet | C13 16 of    |

P:\14000a\14030\preliminary\14030-UTIL.dwg 12/20/2021 9:54 AM BELDRIDGE

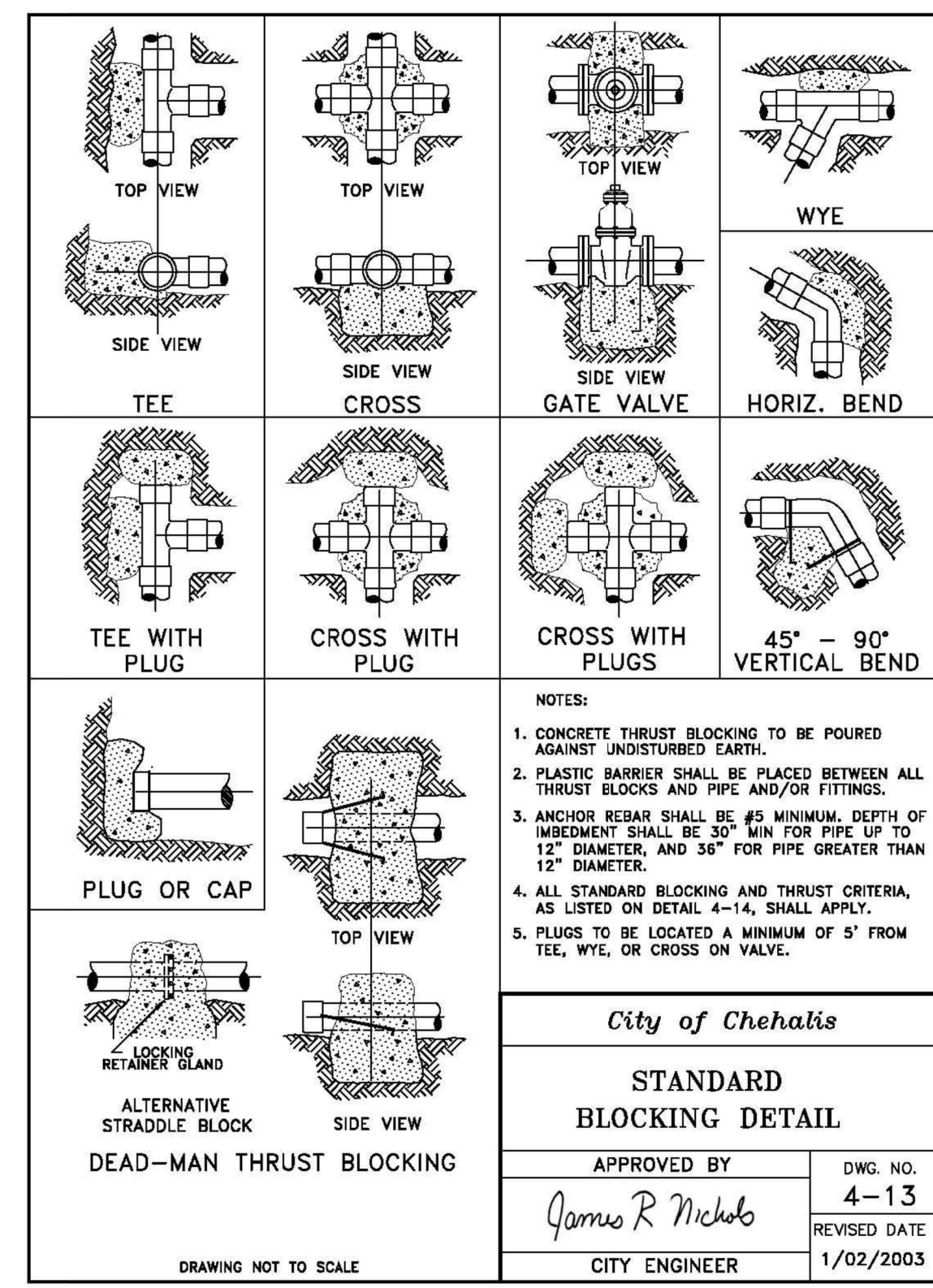
# CHEHALIS INDUSTRIAL PARK

PORTIONS OF THE N.W. 1/4 AND THE S.W. 1/4 OF SEC. 11, TWN. 13 N., RG. 2 W., W.M.  
LEWIS COUNTY, WASHINGTON

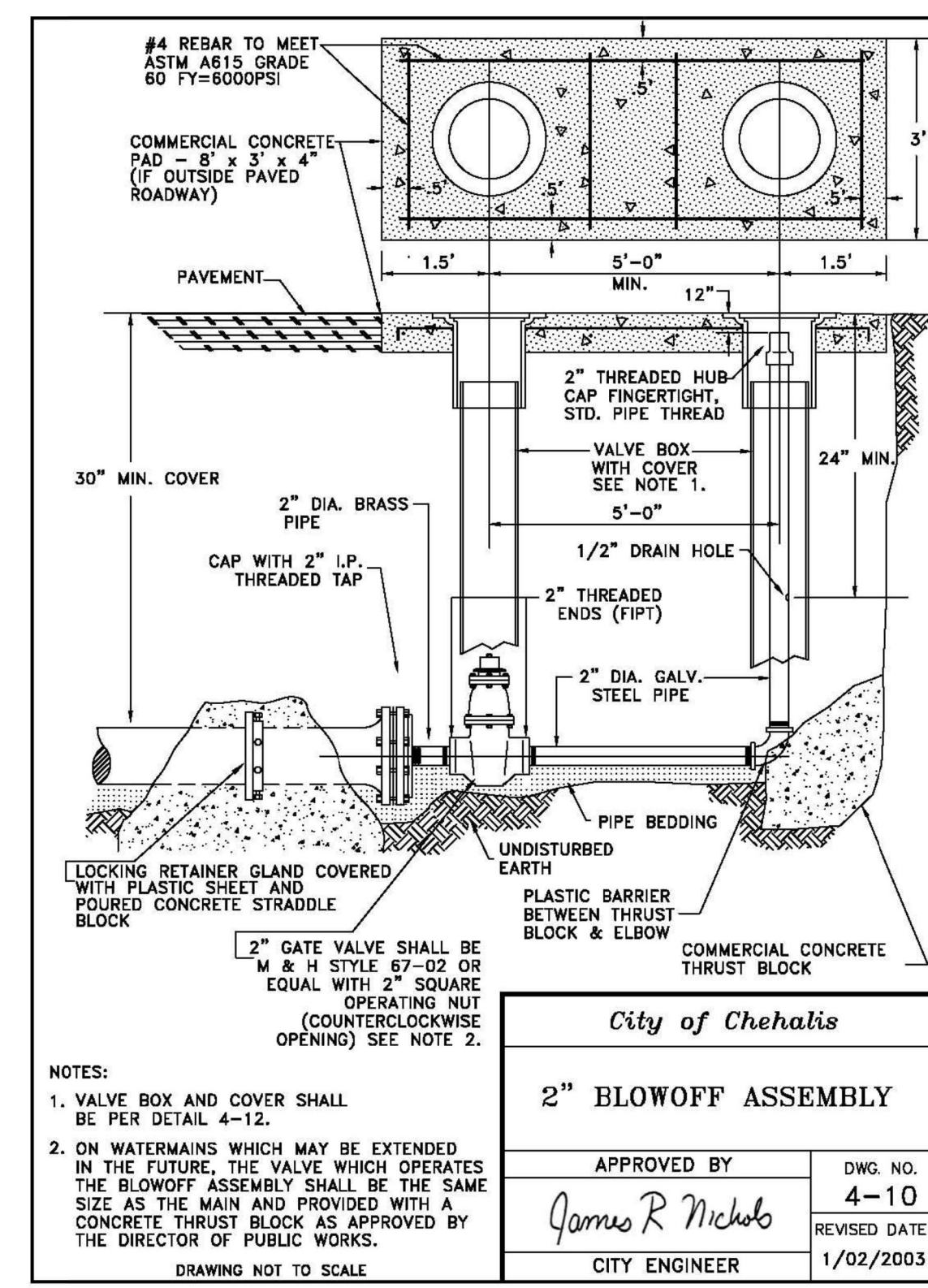
## NOTES AND DETAILS



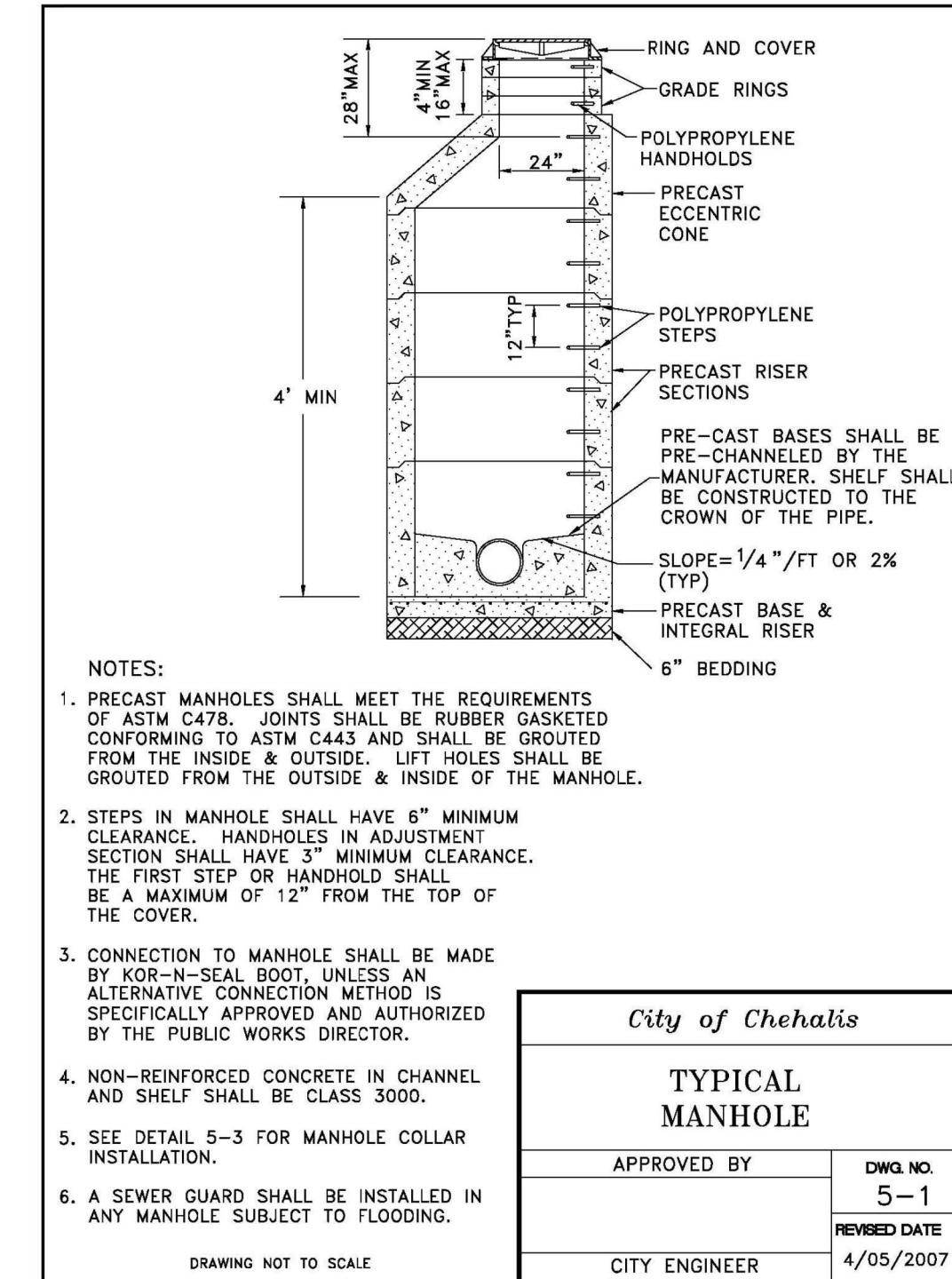
4-12 Valve Box



4-14 Thrust Loads

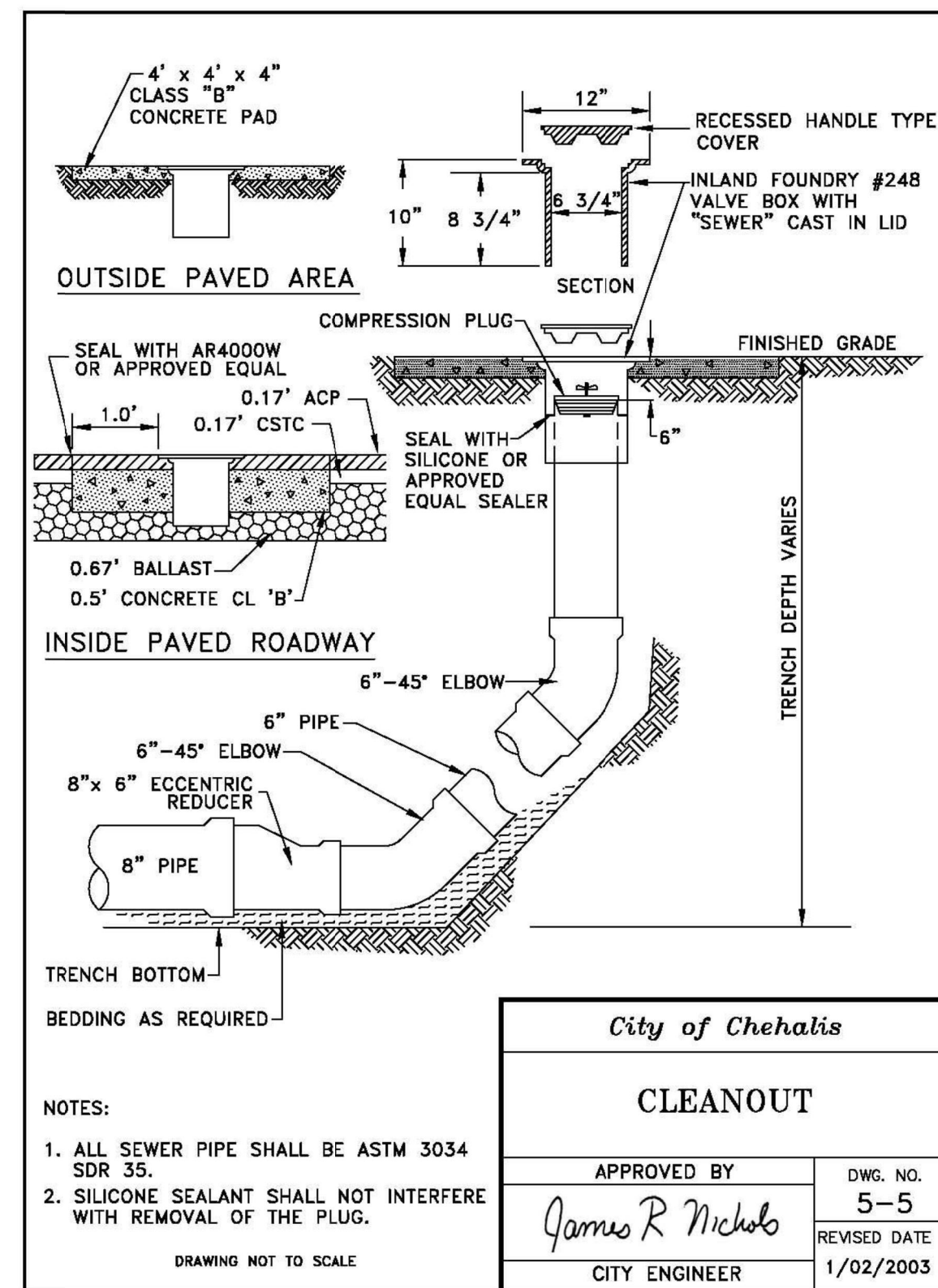


4-11 Connection to Existing Main

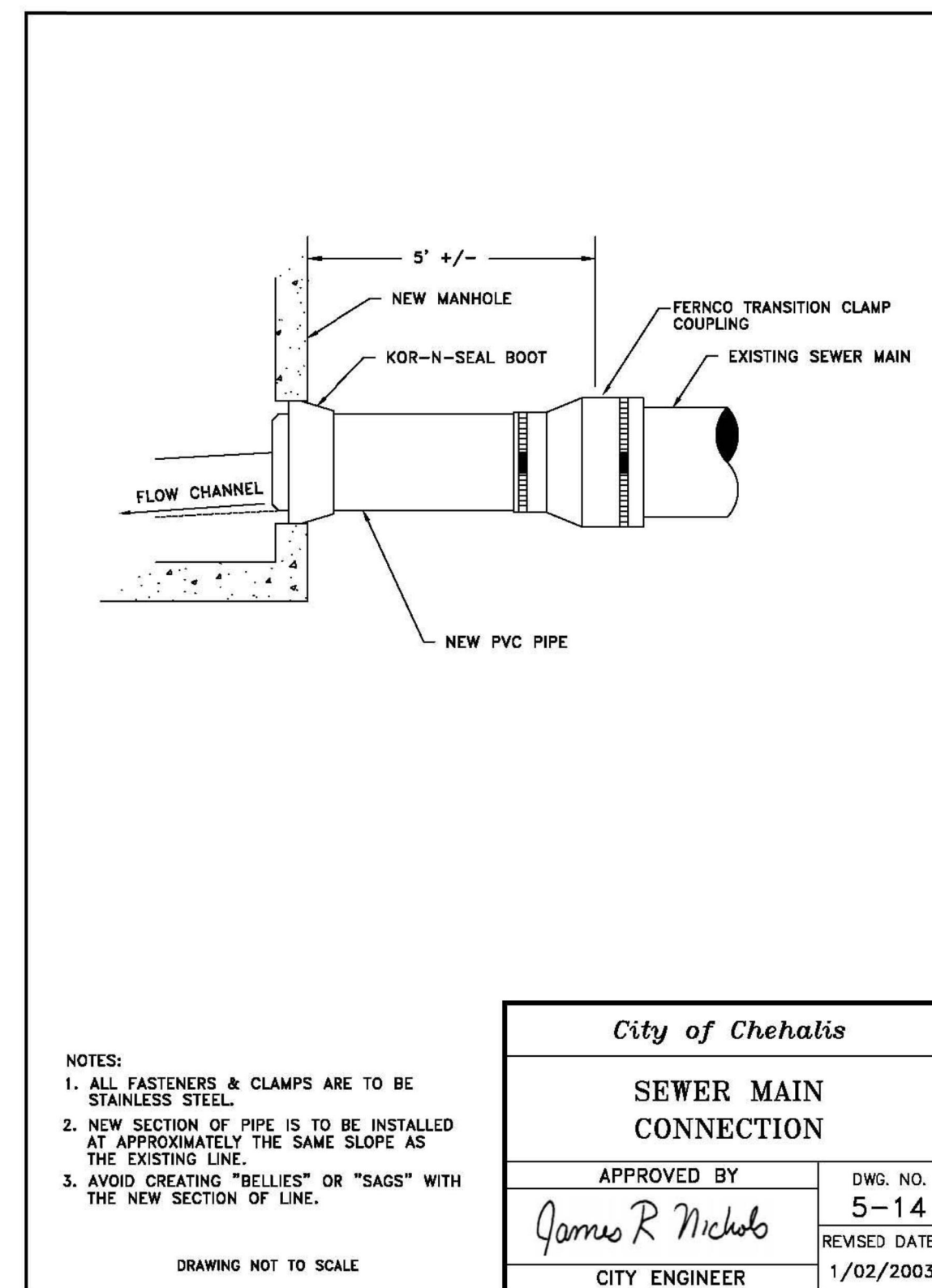


(Ord. 819B § 18, 2007.)

5-2 Shallow Manhole



5-6 1,000 Gallon S.T.E.P. System Septic Tank



5-15 Pig Port

Revision

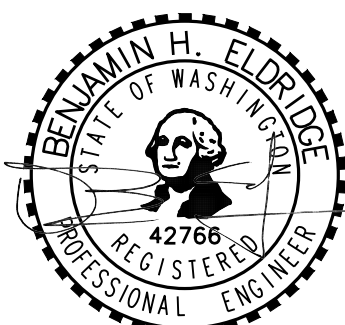
No. Date By Cld. Appr.

Title:

NOTES AND DETAILS FOR CHEHALIS INDUSTRIAL PARK

PUGET WESTERN, INC.  
2000 N CREEK PARKWAY  
BUILDING H  
BOTHELL, WA 98011

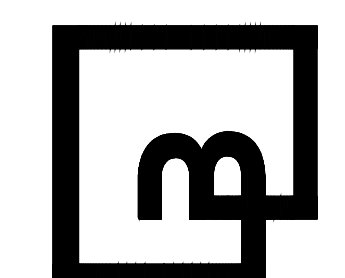
For:



Scale: Horizontal N/A Vertical N/A

Designed: SZG  
Drawn: SZG  
Checked: BHE  
Approved: BHE  
Date: 9/22/21

**Barghausen Consulting Engineers, Inc.**  
18215 72nd Avenue South  
Kent, WA 98032  
425.251.6222  
barghausen.com



APPROVED FOR CONSTRUCTION

APPROVED BY  
PUBLIC WORKS DEPARTMENT OR DESIGNATED CONSULTANT

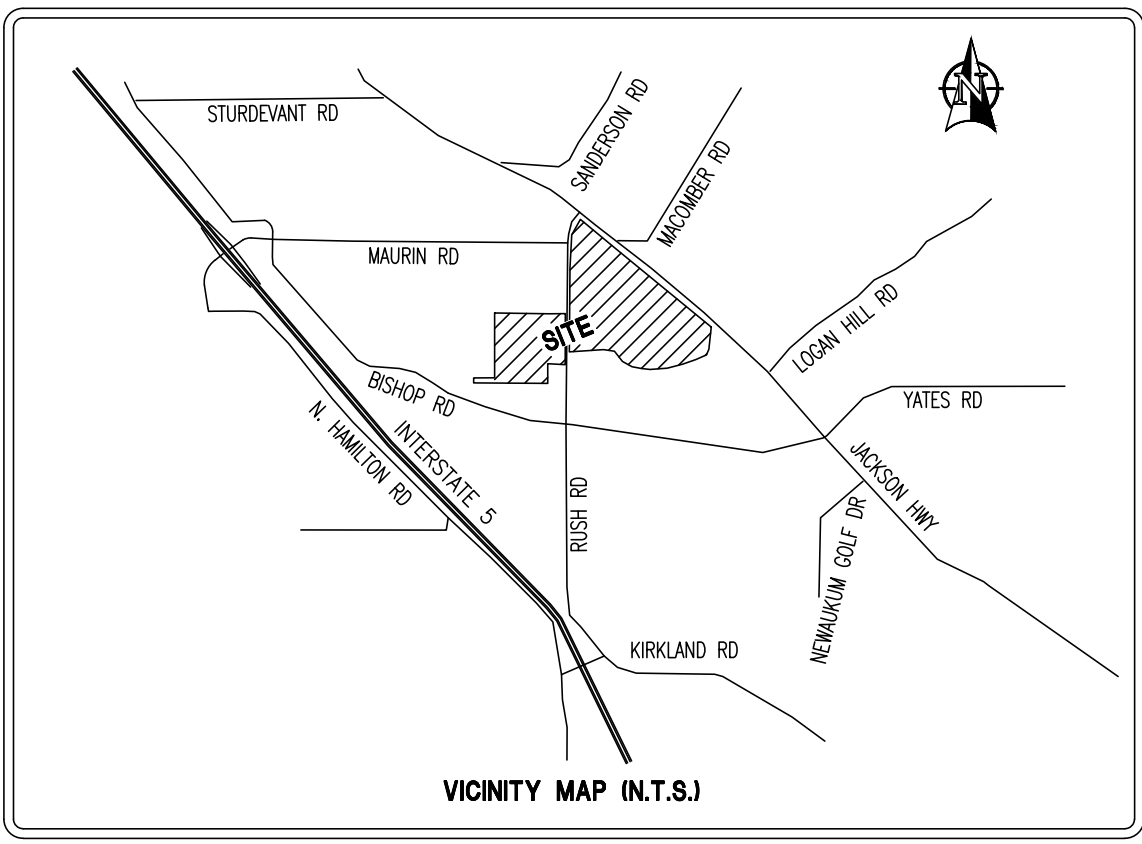
DATE

APPROVAL EXPIRES

Job Number  
**14030**

Sheet  
**C14** of **16**

# ALTA/NSPS LAND TITLE SURVEY



## SURVEY INFORMATION

### BASIS OF BEARINGS NAD83/91 (WSDOT)

BASIS OF BEARINGS FOR THIS SURVEY IN NAD 83/91 PER WSDOT. WSDOT CONTROL POINT NO. CHE-05 WAS HELD FOR POSITION AND A LINE BETWEEN SAID POINT NO. CHE-05 AND CHE-03 WAS HELD FOR ROTATION, BEING SOUTH 48°39'23" EAST.

### NARRATIVE:

THIS IS A FIELD TRAVERSE SURVEY. A "TRIMBLE 56 VISION" ROBOTIC TOTAL STATION, AND A TOPCON GR-5 WERE USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332-130-090. ALL INSTRUMENTS AND EQUIPMENT HAVE BEEN MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURERS' SPECIFICATIONS.

### DATE OF SURVEY:

THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING IN DECEMBER 2016 AND JANUARY 2017. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN DECEMBER OF 2016.

### GROSS LOT AREA:

EAST OF RUSH = 4,511,018±SF (103.559±AC)  
WEST OF RUSH = 1,603,721±SF (36.816±AC)  
TOTAL = 6,114,739±SF (140.375±AC)

### TAX PARCEL NUMBERS:

APN: 017800001009  
APN: 017800014003  
APN: 017800001010  
APN: 017800003000  
APN: 017750020000

### ADDRESSES:

017800001009 (NOT ASSIGNED)  
017800014003 (NOT ASSIGNED)  
2844 JACKSON HIGHWAY, CHEHALIS (017800001010)  
2844 JACKSON HIGHWAY, CHEHALIS (017800003000)  
2001 RUSH ROAD, CHEHALIS (017750020000)

### ZONING:

NO ZONING REPORT PROVIDED.

### FLOOD INFORMATION:

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) INFORMATION: FIRM (FLOOD INSURANCE RATE MAP) MAP NO. 5301021782C PANEL 1782 OF 2500, DATED JULY 17, 2006, FIRM MAP NO. 5301021781C PANEL 1781 OF 2500, DATED JULY 17, 2006, FIRM MAP NO. 5301021368C PANEL 1368 OF 2500, DATED JULY 17, 2006 AND FIRM MAP NO. 5301020242C PANEL 242 OF 2500, DATED JULY 17, 2006. THE SUBJECT PROPERTY IS IN ZONE X (NO BASE FLOOD ELEVATIONS DETERMINED), ZONE X SHADEN (AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD), ZONE AE (BASE FLOOD ELEVATIONS DETERMINED) AND ZONE AE FLOODWAY (THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS AND ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS)

### TITLE REPORT:

ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM FIRST AMERICAN TITLE INSURANCE COMPANY FILE NO. NCS-827205-OR1, DATED DECEMBER 9, 2016, INCLUDING APPURTENANT EASEMENTS AND ADJOINING DEEDS FOR UNPLATTED LOTS, IF ANY. IN PREPARING THIS MAP, BARGHAUSEN CONSULTING ENGINEERS, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS BARGHAUSEN CONSULTING ENGINEERS, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED FIRST AMERICAN TITLE INSURANCE COMPANY'S COMMITMENT. BARGHAUSEN CONSULTING ENGINEERS, INC. HAS RELIED WHOLLY ON FIRST AMERICAN TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE BARGHAUSEN CONSULTING ENGINEERS, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

### SURVEY NOTES:

- ALL DISTANCES SHOWN HEREON ARE GROUND MEASUREMENTS IN U.S. SURVEY FEET.
- THE BOUNDARY CORNERS AND LINES DEPICTED ON THIS MAP REPRESENT DEED LINES ONLY, AND DON'T PURPORT TO SHOW OWNERSHIP LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW. NO GUARANTEE OF OWNERSHIP IS EXPRESSED OR IMPLIED.
- UNDERGROUND UTILITIES AND FEATURES DEPICTED HEREON ARE BASED ON FIELD OBSERVATION, MARKINGS, DEVELOPMENT PLANS, AND/OR AVAILABLE RECORD DOCUMENTS ONLY. THE TRUE LOCATION, NATURE AND/OR EXISTENCE OF BELOW GROUND FEATURES, DETECTED OR UNDETECTED, SHOULD BE VERIFIED.
- THIS SURVEY HAS DEPICTED ALL VISIBLE OCCUPATIONAL INDICATORS (IE. FENCE LINES, BUILDINGS, WALLS, ETC. - SEE MAP FOR PARTICULARS) PER W.A.C. 332-130. LINES OF OCCUPATION, AS DEPICTED, MAY INDICATE AREAS OF POTENTIAL CLAIMS OF UNWRITTEN OWNERSHIP. THIS SURVEY HAS ONLY DEPICTED THE RELATIONSHIP BETWEEN LINES OF OCCUPATION AND DEEDED LINES OF RECORD. NO RESOLUTION OF OWNERSHIP BASED ON UNWRITTEN RIGHTS HAS BEEN MADE BY THIS SURVEY OR BY ANY PERSONNEL OF BARGHAUSEN CONSULTING ENGINEERS, INC.
- THIS IS A FIELD TRAVERSE SURVEY. SPECTRA PRECISION FOCUS 30, TOPCON GR5 GPS AND SPECTRA PRECISION RANGER DATA COLLECTOR WAS USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN W.A.C. 332-130-090. ALL INSTRUMENTS AND EQUIPMENT HAVE BEEN MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURERS' SPECIFICATIONS AND USED BY APPROPRIATELY TRAINED PERSONNEL.
- THIS SURVEY MEETS OR EXCEEDS THE "RELATIVE POSITIONAL PRECISION" REQUIREMENTS SET FORTH IN THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS IN SECTION 3(E).
- BARGHAUSEN CONSULTING ENGINEERS, INC. SURVEY CREWS DETECTED NO OBSERVABLE EVIDENCE OF CHANGES IN STREET RIGHT-OF-WAY LINES OR OF RECENT STREET OR SIDEWALK CONSTRUCTION ON OR ADJACENT TO THE SUBJECT PROPERTY, EXCEPT AS SHOWN.
- INTERIOR WIRE FENCES FOR LIVESTOCK EXIST AND WERE NOT LOCATED FOR THIS SURVEY.

### LEGAL DESCRIPTION:

(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FILE NO. NCS-827205-OR1 DATED DECEMBER 9, 2016 AT 8:00 A.M.)

### PARCEL A

TRACT B OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED OCTOBER 27, 2009, UNDER AUDITOR'S FILE NO. 3335759, IN VOLUME 2 OF BOUNDARY LINE ADJUSTMENTS, PAGE 176, RECORDS OF LEWIS COUNTY, WASHINGTON, BEING LOCATED WITHIN THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

### PARCEL B

TRACT C OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED NOVEMBER 18, 2015, UNDER AUDITOR'S FILE NO. 3439834, IN VOLUME 3 OF BOUNDARY LINE ADJUSTMENTS, PAGE 121, RECORDS OF LEWIS COUNTY, WASHINGTON, BEING LOCATED WITHIN SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

### PARCEL C

THAT PORTION OF THE EAST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON, LYING SOUTHERLY OF THE SOUTHERLY BOUNDARY OF JACKSON HIGHWAY, FORMERLY OLD PACIFIC HIGHWAY NO. 99.

ALSO THAT PORTION OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THE EAST HALF OF THE WEST HALF OF THE SOUTHWEST QUARTER AND THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER LYING SOUTHERLY OF THE SOUTHERLY BOUNDARY OF JACKSON HIGHWAY, FORMERLY OLD PACIFIC HIGHWAY, ALL IN SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON.

EXCEPT THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, WILLAMETTE MERIDIAN, LEWIS COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A CONCRETE MONUMENT, AS SHOWN IN VOLUME 16 OF SURVEYS, PAGE 280, LEWIS COUNTY AUDITOR'S RECORDS, AT THE CENTER OF SECTION 11;  
THENCE SOUTH 02°01'52" WEST, 2603.58 FEET TO A 1/2 INCH IRON ROD AT THE SOUTH QUARTER CORNER OF SECTION 11 AND THE TRUE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED;  
THENCE NORTH 02°01'52" EAST, ALONG THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11, FOR A DISTANCE OF 1178.22 FEET TO THE SOUTH LINE OF THE JACKSON HIGHWAY;

THENCE FOLLOWING SAID SOUTH RIGHT-OF-WAY LINE, ALONG THE ARC OF A 3785 RADIUS CURVE TO THE LEFT (THE RADIAL BEARING OF WHICH IS SOUTH 42°20'21" WEST), THROUGH A CENTRAL ANGLE OF 02°53'59", FOR AN ARC DISTANCE OF 59.44 FEET;  
THENCE NORTH 48°33'38" WEST, 25.08 FEET TO A POINT THAT IS 65 FEET WEST OF THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11;  
THENCE LEAVING SAID SOUTH RIGHT-OF-WAY LINE, SOUTH 02°01'52" WEST, PARALLEL WITH THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 11, FOR A DISTANCE OF 497.56 FEET;

THENCE SOUTH 50°08'16" WEST, 467.61 FEET;  
THENCE SOUTH 77°17'08" WEST, 648.18 FEET;  
THENCE SOUTH 80°00'00" WEST, 153.16 FEET;  
THENCE NORTH 58°30'00" WEST, 648.55 FEET;  
THENCE SOUTH 79°30'00" WEST, 211.06 FEET TO THE WEST LINE OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11;  
THENCE SOUTH 02°09'16" WEST, 520.39 FEET TO THE SOUTHWEST CORNER OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER;  
THENCE SOUTH 87°49'48" EAST, 1964.92 FEET TO THE TRUE POINT OF BEGINNING.

### SPECIAL EXCEPTIONS:

(PER FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FILE NO. NCS-827205-OR1 DATED DECEMBER 9, 2016 AT 8:00 A.M.)

- LIEN OF REAL ESTATE EXCISE SALES TAX UPON ANY SALE OF SAID PREMISES, IF UNPAID 178X.  
(NOT SURVEY RELATED)
- THE LANDS DESCRIBED HEREIN HAVE BEEN CLASSIFIED/DESIGNATED AS AGRICULTURAL LAND AND ARE SUBJECT TO THE PROVISIONS OF RCW 84.33 AND/OR RCW 84.34 WHICH INCLUDE THE REQUIREMENT OF A CONTINUATION OF RESTRICTED USE IN ORDER TO CONTINUE THE PRESENT ASSESSMENT RATE. A CHANGE IN USE CAN CAUSE AN INCREASED ASSESSMENT RATE FOR PRESENT AND PAST YEARS. ANY SALE OR TRANSFER OF ALL OR A PORTION OF SAID PROPERTY REQUIRES EXECUTION OF A NOTICE OF CONTINUANCE FORM BY THE NEW OWNER PRIOR TO CLOSING WITH SUBMISSION TO THE LEWIS COUNTY ASSESSOR AT LEAST 2 WEEKS PRIOR TO RECORDING FOR APPROVAL OF CONTINUANCE OR REMOVAL.  
NOTE: IF THE PROPOSED TRANSACTION INVOLVES A SALE OF THE PROPERTY, SO CLASSIFIED OR DESIGNATED, THERE WILL BE ADDITIONAL REQUIREMENTS REGARDING THE REAL ESTATE TAX AFFIDAVIT.  
PLEASE CONTACT THE LEWIS COUNTY ASSESSOR OR TITLE GUARANTY COMPANY OF LEWIS COUNTY FOR ADDITIONAL INFORMATION.  
TAX PARCEL NO. 0178000-001-010 AND 0178000-001-010  
AFFECTS A PORTION OF PARCEL C  
(NOT SURVEY RELATED)
- MORTGAGE TO SECURE AN INDEBTEDNESS OF THE AMOUNT HEREIN STATED AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS, CONDITIONS, PROVISIONS AND STIPULATIONS.  
AMOUNT : \$5,500.00  
DATED : FEBRUARY 6, 1992  
RECORDED : FEBRUARY 10, 1992  
AUDITOR'S NO. : 9201564  
MORTGAGOR : LAWRENCE E. DAGGY  
MORTGAGEE : BAKER, PAROUTAUD, MANO & MCKERRICHER, LNC., P.C.  
AFFECTS PORTION OF PARCELS A AND B  
SUBORDINATION AGREEMENT RECORDED UNDER AUDITOR'S FILE NO. 9303004, REFERENCING THE DEED OF TRUST RECORDED UNDER AUDITOR'S FILE NO. 9201700 AND THE MORTGAGE RECORDED UNDER AUDITOR'S FILE NO. 9201564.  
(NOT SURVEY RELATED)

4. DEED OF TRUST TO SECURE AN INDEBTEDNESS OF THE AMOUNT HEREIN STATED AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS, CONDITIONS, PROVISIONS AND STIPULATIONS.  
AMOUNT: \$26,000.00  
DATED : FEBRUARY 11, 1992  
RECORDED : FEBRUARY 14, 1992  
AUDITOR'S NO. : 9201700

VOLUME/PAGE : 496/433  
GRANTOR : LAWRENCE E. DAGGY  
TRUSTEE : TITIOR TITLE INSURANCE COMPANY OF CALIFORNIA  
BENEFICIARY : LAUREL SUE DAGGY  
AFFECTS PORTION OF PARCELS A AND B  
THE TRUSTEE OF SAID DEED OF TRUST HAS RESIGNED AND A SUCCESSOR TRUSTEE APPOINTED BY INSTRUMENT  
RECORDED : AUGUST 11, 1992  
AUDITOR'S NO. : 9210218  
SUCCESSOR TRUSTEE : MARK C. SCHEIBER  
SUBORDINATION AGREEMENT RECORDED UNDER AUDITOR'S FILE NO. 9303004, REFERENCING THE DEED OF TRUST RECORDED UNDER AUDITOR'S FILE NO. 9201700 AND THE MORTGAGE RECORDED UNDER AUDITOR'S FILE NO. 9201564.  
(NOT SURVEY RELATED)

5. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED MEMORANDUM OF OPTION TO PURCHASE REAL PROPERTY  
DATED : NOVEMBER 17, 2009  
RECORDED : NOVEMBER 18, 2009  
AUDITOR'S NO. : 3336859  
AFFECTS PARCEL A  
(NOT SURVEY RELATED)

6. DEED OF TRUST TO SECURE AN INDEBTEDNESS OF THE AMOUNT HEREIN STATED AND ANY OTHER AMOUNTS PAYABLE UNDER THE TERMS, CONDITIONS, PROVISIONS AND STIPULATIONS.  
AMOUNT : \$2,411,777.00  
DATED : AUGUST 13, 2012  
RECORDED : AUGUST 16, 2012

AUDITOR'S NO. : 3384403  
GRANTOR : CLARENCE F. RUNYON AND EVA L. RUNYON, HUSBAND AND WIFE  
TRUSTEE : CHICAGO TITLE COMPANY  
BENEFICIARY : FIJEST WESTERN, INC.  
AFFECTS PARCEL C  
(NOT SURVEY RELATED)

7. SHOWING OF AUTHORITY OF THE OFFICERS EXECUTING THE PROPOSED DEED OR CONTRACT ON BEHALF OF THE HEREIN NAMED CORPORATION SHOULD BE SUBMITTED.  
CORPORATION : THE INDUSTRIAL COMMISSION  
(NOT SURVEY RELATED)

8. SHOWING OF AUTHORITY OF THE OFFICERS EXECUTING THE PROPOSED DEED OR CONTRACT ON BEHALF OF THE HEREIN NAMED CORPORATION SHOULD BE SUBMITTED.  
CORPORATION : PORT OF CHEHALIS  
(NOT SURVEY RELATED)

9. SHOWING OF AUTHORITY OF THE OFFICERS EXECUTING THE PROPOSED DEED OR CONTRACT ON BEHALF OF THE HEREIN NAMED CORPORATION SHOULD BE SUBMITTED.  
CORPORATION : FIJEST WESTERN, INC.  
(NOT SURVEY RELATED)

10. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED COVENANT CONTAINED IN DECLARATION OF RESTRICTIVE COVENANT  
DATED : OCTOBER 13, 1982  
RECORDED : OCTOBER 13, 1982  
AUDITOR'S NO. : 905363  
EXECUTED BY : LAWRENCE E. DAGGY, ET UX  
AFFECTS PORTION OF PARCELS A AND B  
(NOT PLOTTABLE)

11. FENCES NOT LOCATED ON PROPERTY LINES AS DISCLOSED BY SURVEYS RECORDED UNDER AUDITOR'S FILE NO. 947515, 960019 AND 3292578  
(NOT PLOTTABLE)

12. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED A RESOLUTION OF THE PORT OF CHEHALIS  
DATED : JANUARY 11, 1996  
RECORDED : FEBRUARY 27, 1996  
AUDITOR'S NO. : 9602850  
(NOT PLOTTABLE)

13. AN EASEMENT AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED HEREIN AND INCIDENTAL PURPOSES.  
FOR : INGRESS AND EGRESS  
IN FAVOR OF NORTHWEST PIPELINE CORPORATION  
RECORDED MARCH 13, 2002  
AUDITOR'S NO. 3133088  
AFFECTS PARCEL A  
(PLOTTED HEREON)

14. RESTRICTIONS, CONDITIONS, PROVISIONS, EASEMENTS AND NOTES CONTAINED AND/OR DECIATED ON THE FACE OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED OCTOBER 27, 2009, UNDER AUDITOR'S FILE NO. 3335759 AND 3335760, AND THOSE PROVIDED BY THE STATUTE.  
AFFECTS PARCEL A  
(PLOTTED HEREON) DOCUMENT CREATES CURRENT LOT CONFIGURATION.

15. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED STATUTORY WARRANTY DEED  
DATED : NOVEMBER 12, 2009  
RECORDED : NOVEMBER 18, 2009  
AUDITOR'S NO. : 3336858  
EXECUTED BY: PORT OF CHEHALIS  
AFFECTS PORTION OF PARCEL A  
(PLOTTED HEREON) AREA DESCRIBED IS THE "OLD" BOUNDARY LINE ADJUSTMENT LOT LINE. DOCUMENT CONTAINS REVERSIONARY CLAUSE ESTABLISHING THE RIGHT OF THE GRANTOR TO REPURCHASE THE PROPERTY IF THE LAND IS NOT DEVELOPED WITHIN THREE YEARS.

16. AN EASEMENT AND THE TERMS AND PROVISIONS THEREOF AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED HEREIN AND INCIDENTAL PURPOSES.  
FOR: SEWER LINE  
IN FAVOR OF: CITY OF CHEHALIS  
RECORDED: OCTOBER 01, 1996  
AUDITOR'S NO.: 3008918  
AFFECTS: AFFECTS PORTION OF PARCEL B  
(PLOTTED HEREON)

17. AN EASEMENT AND THE TERMS AND PROVISIONS THEREOF AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED HEREIN AND INCIDENTAL PURPOSES.  
FOR: PIPELINE  
IN FAVOR OF: NORTHWEST PIPELINE CORPORATION  
RECORDED: APRIL 15, 2002  
AUDITOR'S NO.: 3136487  
AFFECTS: AFFECTS PORTION OF PARCEL B  
(PLOTTED HEREON)

18. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED SEWER REIMBURSEMENT CONTRACT  
DATED: APRIL 11, 1994  
RECORDED: MAY 23, 2003  
AUDITOR'S NO.: 3167470  
(NOT PLOTTABLE) BLANKET REIMBURSEMENT CONTRACT

19. TERMS AND PROVISIONS OF INSTRUMENT ENTITLED WATER REIMBURSEMENT CONTRACT  
DATED: APRIL 11, 1994  
RECORDED: MAY 23, 2003  
AUDITOR'S NO.: 3167471  
(NOT PLOTTABLE) BLANKET REIMBURSEMENT CONTRACT

20. TERMS, PROVISIONS, CONDITIONS, DEDICATIONS, NOTES, EASEMENTS AND RESTRICTIONS, IF APPLICABLE AS CONTAINED AND/OR DEVICATED ON THE FACE OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED NOVEMBER 18, 2015, UNDER AUDITOR'S FILE NO. 3439834 AND 3439835, AND THOSE PROVIDED BY THE STATUTE.  
AFFECTS PARCEL B  
(PLOTTED HEREON) DOCUMENT CREATES CURRENT LOT CONFIGURATION.

## SURVEYOR'S METES & BOUNDS DESCRIPTION:

### (TITLE PARCELS A & B)

ALL OF TRACT C OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED NOVEMBER 18, 2015, UNDER AUDITOR'S FILE NO. 3439834, IN VOLUME 3 OF BOUNDARY LINE ADJUSTMENTS, PAGE 121, RECORDS OF LEWIS COUNTY, WASHINGTON, AND THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 13 NORTH, RANGE 2 WEST, WILLAMETTE MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT C;  
THENCE SOUTH 89°59'40" EAST, 615.19 FEET ALONG THE SOUTH LINE OF SAID TRACT B TO THE SOUTHEAST CORNER OF SAID TRACT C, BEING A POINT ON THE EAST LINE OF THE WEST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 11;  
THENCE SOUTH 02°08'56" WEST, 23.61 FEET ALONG SAID EAST LINE;  
THENCE NORTH 79°20'21" WEST, 346.35 FEET, 211.53 FEET;  
THENCE SOUTH 58°30'51" EAST, 648.55 FEET;  
THENCE NORTH 89°59'09" EAST, 153.16 FEET;  
THENCE NORTH 77°16'15" EAST, 648.18 FEET;  
THENCE NORTH 50°07'25" EAST, 467.61 FEET TO A POINT ON A LINE PARALLEL WITH AND 65.00 FEET WEST OF THE EAST LINE OF SAID SOUTHWEST QUARTER OF SECTION 11;  
THENCE NORTH 02°01'01" EAST, 503.45 FEET ALONG SAID PARALLEL LINE TO THE SOUTH MARGIN OF JACKSON HIGHWAY;  
THENCE NORTH 48°32'30" WEST, 904.16 FEET ALONG SAID SOUTH MARGIN;  
THENCE NORTH 48°35'43" WEST, 1,107.94 FEET ALONG SAID SOUTH MARGIN;  
THENCE NORTH 49°47'37" WEST, 874.04 FEET ALONG SAID SOUTH MARGIN AND THE NORTH LINE OF SAID TRACT C TO AND ANGLE POINT ON THE NORTH LINE OF SAID TRACT C;  
THENCE NORTH 64°59'47" WEST, 113.56 FEET ALONG SAID NORTH LINE TO THE NORTHERMOST CORNER OF SAID TRACT C, BEING A POINT ON A NON-TANGENT CURVE, THE RADIUS OF WHICH BEARS SOUTH 49°56'10" EAST;  
THENCE SOUTHERLY ALONG THE WEST LINE OF SAID TRACT C, ALONG THE ARC OF A CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 760.00 FEET, THROUGH A CENTRAL ANGLE OF 37°52'16", AND AN ARC LENGTH OF 502.34 FEET;  
THENCE SOUTH 02°11'34" WEST, 2,107.21 FEET ALONG SAID WEST LINE TO THE POINT OF BEGINNING.

ALSO

### (TITLE PARCEL A)

ALL OF TRACT B OF BOUNDARY LINE ADJUSTMENT NO. 09-151, RECORDED OCTOBER 27, 2009, UNDER AUDITOR'S FILE NO. 3335759, IN VOLUME 2 OF BOUNDARY LINE ADJUSTMENTS, PAGE 176, RECORDS OF LEWIS COUNTY, WASHINGTON, BEING LOCATED WITHIN THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 13 NORTH, RANGE 2 WEST, W.M., LEWIS COUNTY, WASHINGTON, PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID TRACT B;  
THENCE SOUTH 88°41'10" EAST, 1,253.22 FEET ALONG THE NORTH LINE OF SAID TRACT B TO AN ANGLE POINT;  
THENCE SOUTH 02°11'34" WEST, 19.28 FEET TO AN ANGLE POINT;  
THENCE SOUTH 87°48'25" EAST, 25.00 FEET TO THE NORTHEAST CORNER OF SAID TRACT B;  
THENCE SOUTH 02°11'34" WEST, 960.45 FEET ALONG THE EAST LINE OF SAID TRACT B TO AN ANGLE POINT;  
THENCE NORTH 85°45'00" WEST, 289.37 FEET ALONG THE BOUNDARY OF SAID TRACT B TO AN ANGLE POINT;  
THENCE SOUTH 02°10'21" WEST, 346.35 FEET THE SOUTHERNMOST SOUTHEAST CORNER OF SAID TRACT B;  
THENCE NORTH 88°46'17" WEST, 1,243.90 FEET ALONG THE SOUTH LINE OF SAID TRACT B TO THE SOUTHWEST CORNER OF SAID TRACT B;  
THENCE NORTH 02°06'43" EAST, 100.01 FEET ALONG THE WEST LINE TO AN ANGLE POINT;  
THENCE SOUTH 88°46'17" EAST, 256.57 FEET ALONG THE BOUNDARY OF SAID TRACT B TO AN ANGLE POINT;  
THENCE NORTH 02°06'43" EAST, 1,214.63 FEET ALONG THE WEST LINE OF SAID TRACT B TO THE POINT OF BEGINNING.

(THE LAND DESCRIBED IN THIS LEGAL DESCRIPTION IS THE SAME DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FILE NO. NCS-827205-OR1 DATED DECEMBER 9, 2016 AT 8:00 A.M., AND THE PURPOSE OF THIS LEGAL DESCRIPTION IS TO SATISFY CLIENT SURVEY REQUIREMENTS.

### SURVEYOR'S CERTIFICATION:

TO: FRED MEYER STORES, INC. AND FIRST AMERICAN TITLE INSURANCE COMPANY;

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS AND INCLUDES ITEMS 2, 3, 4, 6(A), 7(A), 7(B), 8, 9, 11, 13, AND 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 20, 2017.

DATE OF PLAT OR MAP: FEBRUARY 14, 2017

BRIAN D. GILLOOLY, PLS  
WASHINGTON REGISTRATION NO. 46315  
BGILLOOLY@BARGHAUSEN.COM

REVISED PER COMMENTS  
1 2/21/17  
2 2/25/17

By: Clkd. I Appr.  
Date

Revision

No.

**For:**  
THE KROGER COMPANY  
c/o BILL KNIGHT  
1600 ORMSBY STATION COURT  
LOUISVILLE, KY 40223

Scale:  
Horizontal 1"=200'  
Vertical

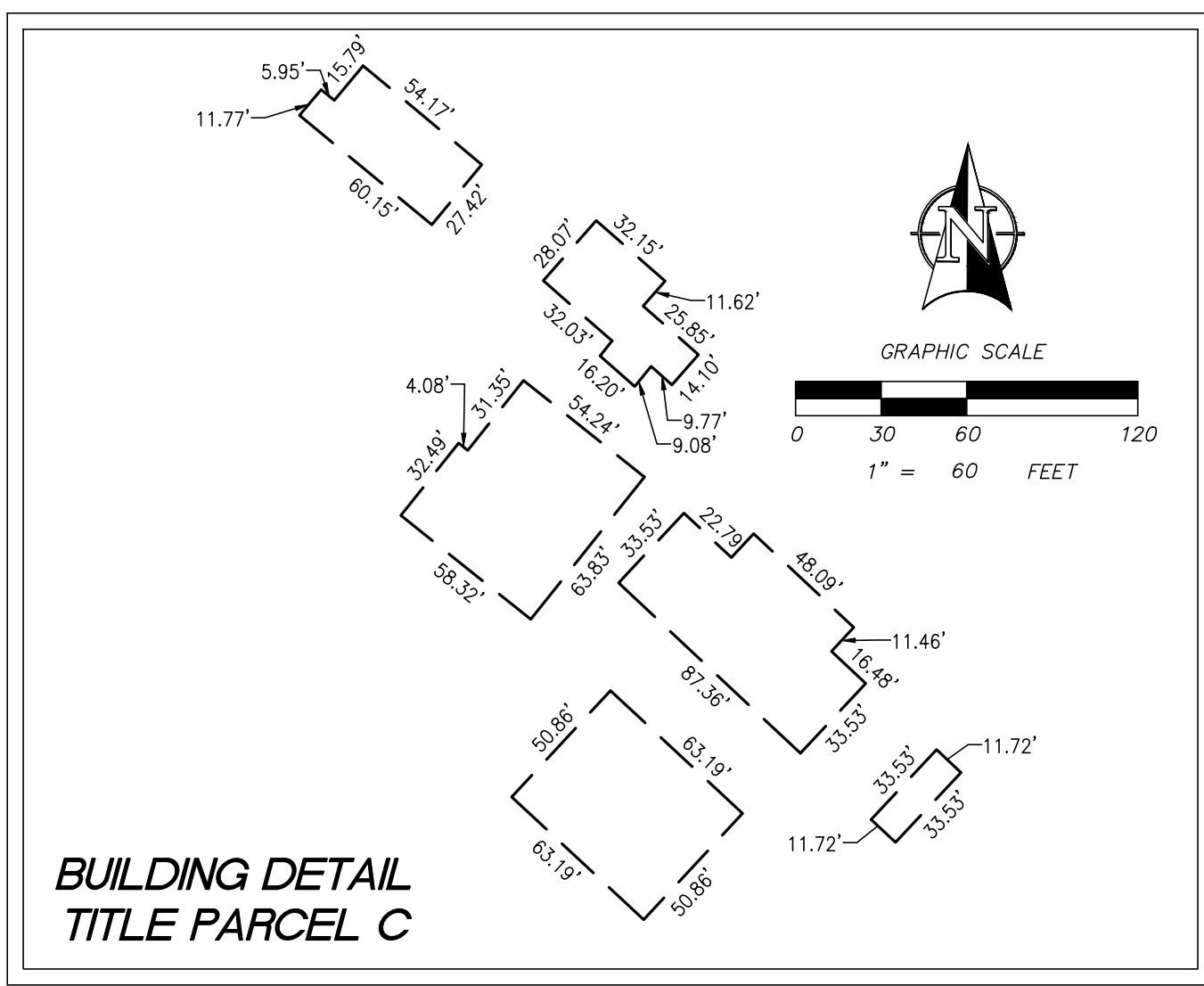
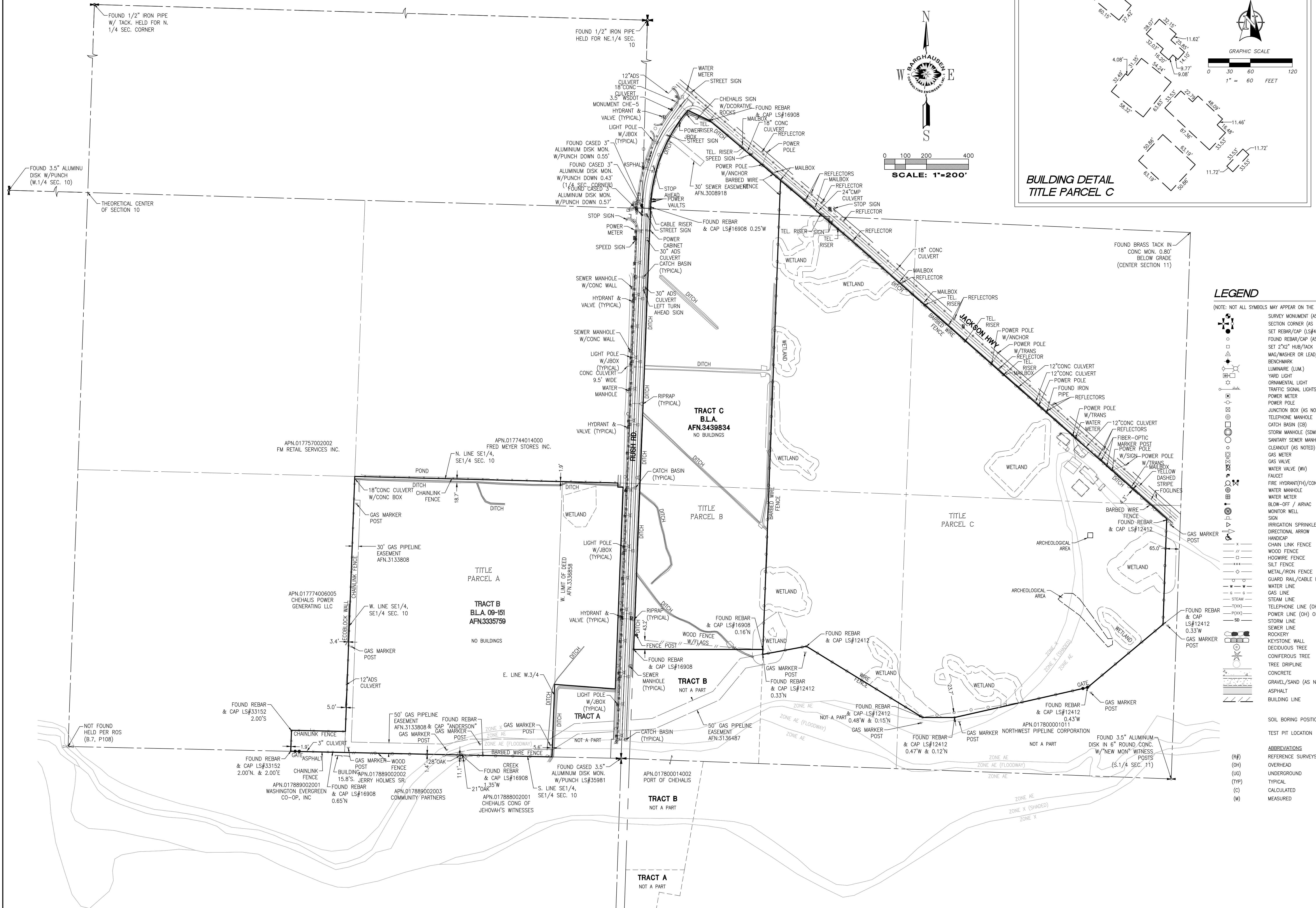
Designed: ———  
Drawn: —STML  
Checked: —BDC  
Approved: —BDC  
Date: 2/21/17

18215 72ND AVENUE SOUTH  
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SURVEYING, ENVIRONMENTAL SERVICES  
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Job Number  
**18347**  
Sheet  
**1** of **2**

# ALTA/NSPS LAND TITLE SURVEY



**LEGEND**

(NOTE: NOT ALL SYMBOLS MAY APPEAR ON THE MAP)

|  |                                  |
|--|----------------------------------|
|  | SURVEY MONUMENT (AS NOTED)       |
|  | SECTION CORNER (AS NOTED)        |
|  | SET REBAR/CAP (LS#45789)         |
|  | FOUND REBAR/CAP (AS NOTED)       |
|  | SET 2"x2" HUB/TACK LINE STAKE    |
|  | MAG/WASHER OR LEAD/TACK          |
|  | BENCHMARK                        |
|  | LUMINAIRE (LUM)                  |
|  | YARD LIGHT                       |
|  | ORNAMENTAL LIGHT                 |
|  | TRAFFIC SIGNAL LIGHTS            |
|  | POWER METER                      |
|  | POWER METER                      |
|  | JUNCTION BOX (AS NOTED)          |
|  | TELEPHONE MANHOLE                |
|  | CATCH BASIN (CB)                 |
|  | STORM MANHOLE (SSMH)             |
|  | SEWAGE MANHOLE (SSMH)            |
|  | CLEANOUT (AS NOTED)              |
|  | GAS METER                        |
|  | GAS VALVE                        |
|  | WATER VALVE (WV)                 |
|  | FAUCET                           |
|  | FIRE HYDRANT(FH)/CONNECTION(FDC) |
|  | WATER MANHOLE                    |
|  | WATER METER                      |
|  | BLOW-OFF / AIRVAC                |
|  | MONITOR WELL                     |
|  | SIGN                             |
|  | IRRIGATION SPRINKLER             |
|  | DIRECTIONAL ARROW                |
|  | HANDICAP                         |
|  | CHAIN LINK FENCE                 |
|  | WOOD FENCE                       |
|  | HOOVRE FENCE                     |
|  | SILT FENCE                       |
|  | METAL/IRON FENCE                 |
|  | GUARD RAIL/CABLE FENCE           |
|  | WATER LINE                       |
|  | GAS LINE                         |
|  | STEAM LINE                       |
|  | TELEPHONE LINE (OH) OR (UG)      |
|  | POWER LINE (OH) OR (UG)          |
|  | STORM LINE                       |
|  | SEWER LINE                       |
|  | ROCKERY                          |
|  | KEYSTONE WALL                    |
|  | CONIFEROUS TREE                  |
|  | DECIDUOUS TREE                   |
|  | TREE DRIPLINE                    |
|  | CONCRETE                         |
|  | GRAVEL/SAND (AS NOTED)           |
|  | ASPHALT                          |
|  | BUILDING LINE                    |
|  | SOIL BORING POSITION             |
|  | TEST PIT LOCATION                |
|  | ABBREVIATIONS                    |
|  | REFERENCE SURVEYS                |
|  | OVERHEAD                         |
|  | UNDERGROUND                      |
|  | TYPICAL                          |
|  | CALCULATED                       |
|  | MEASURED                         |

Revision

|     |         |     |         |          |
|-----|---------|-----|---------|----------|
| No. | Date    | By  | Checked | Approved |
| 2   | 2/27/17 | BBC | BBC     | BBC      |
| 1   | 2/27/17 | BBC | BBC     | BBC      |

**Title:** ALTA/NSPS LAND TITLE SURVEY  
 PTN OF THE SW1/4 OF SEC. 11,  
 AND PTN OF THE SW1/4 OF THE NW1/4 OF SEC. 11,  
 AND PTN OF THE SE1/4 OF THE SE1/4 OF SEC. 10,  
 AND PTN OF THE SW1/4 OF THE SE1/4 OF SEC. 10,  
 TWP. 13 N., RBE 2 WEST, W. M.  
 CITY OF CHEHALIS LEWIS COUNTY STATE OF WASHINGTON

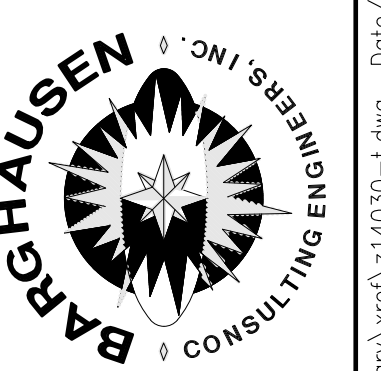
**For:** THE KROGER COMPANY  
 c/o BILL KNIGHT  
 1600 ORMSBY STATION COURT  
 LOUISVILLE, KY 40223

Scale: Horizontal 1"=200'  
 Vertical 1"=200'

Designed: [Signature]  
 Drawn: [Signature]  
 Checked: [Signature]  
 Approved: [Signature]  
 Date: 2/27/17

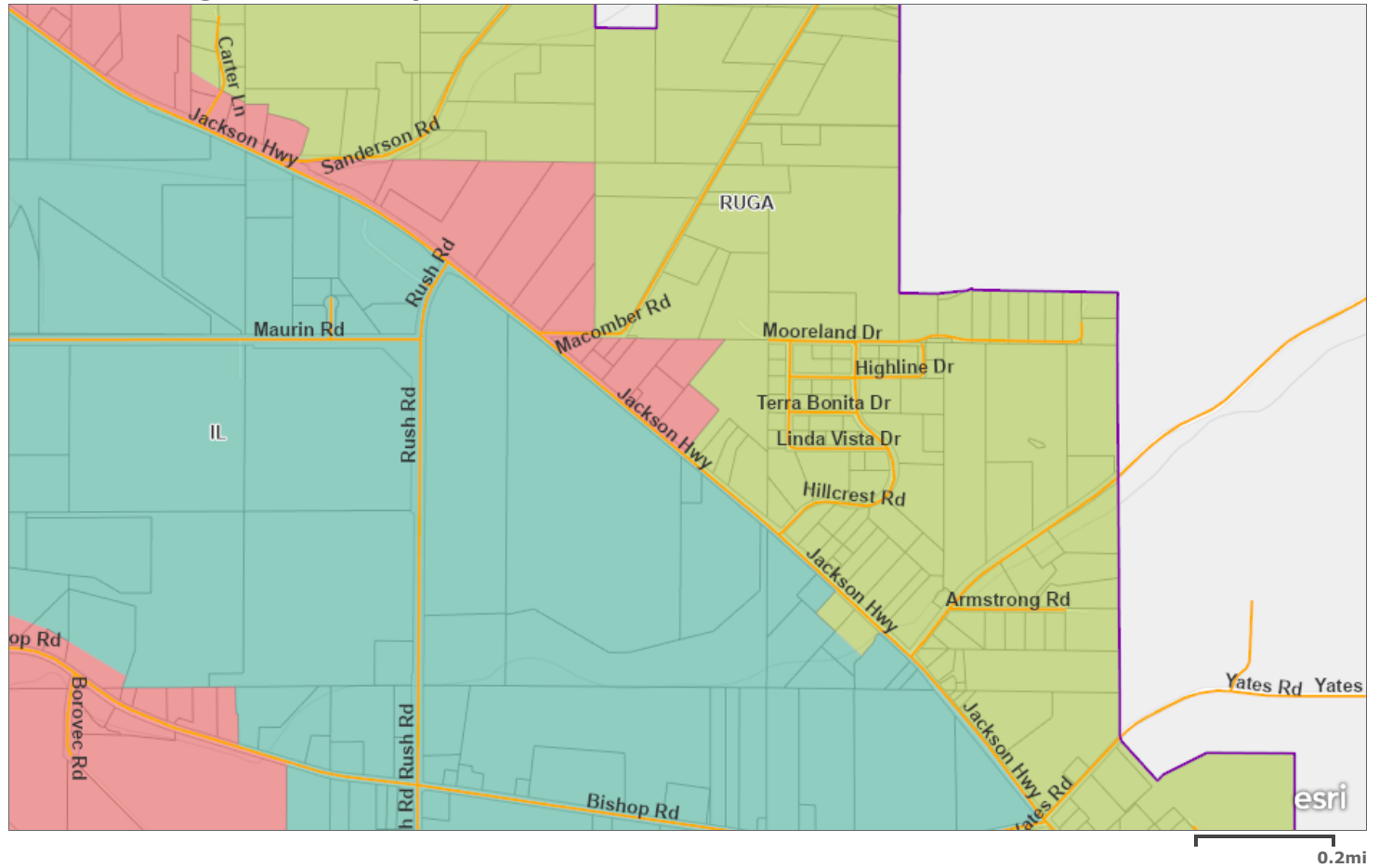
18215 72ND AVENUE SOUTH  
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**Exhibit 4**  
**Excerpt of City Zoning Map of Properties**

### Chehalis Zoning Interactive Map



Esri Community Maps Contributors, WA State Parks GIS, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

**Attachment 5**

Revised SEPA Checklist  
dated March 18, 2022



---

## SEPA ENVIRONMENTAL CHECKLIST

### ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

### ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

### ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

### ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## A. Background

1. Name of proposed project, if applicable:

Chehalis Industrial Park

2. Name of applicant:

Puget Western, Inc.

3. Address and phone number of applicant and contact person:

Puget Western Inc.  
20000 North Creek Parkway, Building H  
Bothell, WA 98011  
Joel Molander  
425-487-6550

Contact: Barghausen Consulting Engineers  
18215-72nd Avenue South  
Kent, WA 98032  
Ben Eldridge  
425-251-6222

4. Date checklist prepared:

October 15, 2021  
*Revised February 25, 2022*

5. Agency requesting checklist:

City of Chehalis

6. Proposed timing or schedule (including phasing, if applicable):

Construction to start spring of 2023 or as soon as applicable permits are issued.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No future expansions or additions are proposed under this application.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Geotechnical Engineering Report – AMEC Forster Wheeler, dated July 30, 2007  
Geotechnical Engineering Report – Terracon Consultants Inc., dated September 10, 2021  
Stormwater Site Plan – Barghausen Consulting Engineers, dated March 2, 2022, 2021  
Alternatives Analysis – Clean Water Act Sec. 404(B)(1) Documentation – Soundview Consultants, dated April 30, 2021  
Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan – Soundview Consultants, dated October 10, 2020  
Wetland Delineation and Analysis – John Comis Associates Inc., dated June 25, 2009  
Traffic Impact Analysis – Heath & Associates, dated January 2008  
Traffic Impact Analysis – Heath & Associates, dated December 7, 2020  
Revised Traffic Impact Analysis – Heath & Associates, dated February 22, 2022  
Stormwater Pollution Prevention Plan (part of Stormwater Site Plan) – Barghausen Consulting Engineers, dated August 24, 2021

Treatment Plan for Archaeological Sites 45LE913 and 45LE1062 – Cultural Resources Consultants, dated September 17, 2021  
 Cultural Resources Assessment – Cultural Resource Consultants, Inc., dated May 7, 2021  
 Cultural Resources Assessment – Maurin Road Extension - Cultural Resource Consultants, Inc., dated April 30, 2021  
 Cultural Resources Survey Tech Memo 1507J-1 - Cultural Resource Consultants, Inc., dated December 4, 2015  
 Cultural Resources Survey Tech Memo 1507J-2 - Cultural Resource Consultants, Inc., dated January 15, 2016  
 Noise Study – to be prepared  
 Phase I Environmental Site Assessment – Adapt Engineering, Inc., dated March 20, 2008  
 Phase I Environmental Site Assessment – Amec Foster Wheeler, dated February 6, 2017 - Amec Foster Wheeler, dated April 5, 2017  
 Asbestos Survey - February 16, 2017  
 US Army Corps of Engineers, Washington Department of Ecology – Joint Public Notice for Section 404 Permit and Section 401 Water Quality Certification, dated November 24, 2020.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

A Letter of Map Amendment has been submitted to the Federal Emergency Management Agency (FEMA) and is currently in review under Case No: 21-10-0584A.

10. List any government approvals or permits that will be needed for your proposal, if known.

Environmental Determination by City of Chehalis  
 Design Review by City of Chehalis  
 Building Permit by City of Chehalis  
 Plumbing/Mechanical Permits by City of Chehalis  
 Electrical Permit by Washington State Department of Labor and Industries  
 Boundary Line Adjustment or Lot Combination by City of Chehalis  
 Grade and Fill Permit by City of Chehalis  
 Site Development Permit by City of Chehalis  
 Water Line Extension by City of Chehalis  
 Sanitary Sewer Extension by City of Chehalis  
 Right -of-Way Use Permit by City of Chehalis  
 Section 404 Permit by United States Army Corps of Engineers  
 Section 401 Permit by Washington State Department of Ecology  
 NPDES Construction Stormwater General Permit by Washington State Department of Ecology

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project will construct an approximately 1,001,615 square foot warehouse distribution center building on an approximate 69.42-acre site located at 2844 Jackson Highway in Chehalis, Lewis County, Washington. The site is zoned Light Industrial (LI) within the Chehalis Urban Growth Area and is currently mostly undeveloped property used for agricultural hay production and contains a single-family double wide mobile home, pole barns and outbuildings. All structures will be removed for development of the property. Along with demolition of existing structures and new building construction, the project will include grading activities, paved truck and vehicular parking areas, storm drainage system, water and sanitary

sewer extensions, landscaping, franchise utilities and off-site roadway improvements, if required by the City of Chehalis. The site contains 25 potentially regulated wetland areas and five agricultural ditches, one of which is likely to be considered a regulated waterbody. Due to the nature of the proposed development, impacts to the wetlands are unavoidable, however, the compensatory mitigation proposed to mitigate the impacts will result in no net loss of wetland function within the Upper Chehalis watershed. A boundary line adjustment or lot combination will be processed to configure to parcels to meet the proposed site layout.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The site is located on the south side of Jackson Highway between Rush Road to the west and Hillcrest Road to the east.

Site Address: 2844 Jackson Highway

Tax Parcel Nos: 017800001009  
017800001010  
017800003000

## B. Environmental Elements

### 1. Earth

- a. General description of the site  
(circle one):  Flat, rolling, hilly, steep slopes, mountainous,  
other \_\_\_\_\_

- b. What is the steepest slope on the site (approximate percent slope)?

The site is generally flat with the steepest slope on the site of approximately 10 percent.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Per the geotechnical engineering report provided by *Terracon Consultants*, the subsurface materials on the site consist of Holocene overbank and fluvial deposits overlying Pleistocene alpine glacial outwash. The deposits include interbedded soft to medium stiff clay, sandy clay, loose to dense sand and gravel deposits of variable silt and lay content. Groundwater at the site is shallow, particularly during the wet season. Please refer to the Geotech report for additional information.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None are known to exist to our knowledge.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Approximately 50,000 cubic yards of cut and 500,000 cubic yards of fill will be used to prepare the site for building construction. Approximately 100,000 cubic yards of stripping will be removed. The source of fill is unknown at this time but will be from an approved source.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Depending on weather conditions at time of construction, erosion could occur as a result of construction activities.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 79 percent of the site will be impervious surface upon project completion.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

A temporary erosion and sedimentation control plan will be designed per City of Chehalis standards and installed to control erosion impacts that may occur during the construction phase of the project. The project will also require coverage under the NPDES Construction Stormwater General Permit from the Department of Ecology.

## **2. Air**

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

During the construction phase of the project, emissions and minor dust from construction equipment would be present from approximately 7 am to 6 pm, Monday through Friday. Upon project completion, emissions from vehicular traffic to and from the site would be present daily, 7 days per week.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None are known to exist to our knowledge.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Construction equipment will comply with state emissions standards. No other specific measures are proposed.

## **3. Water**

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes, the site contains 25 potentially regulated wetlands and five agricultural drainage ditches, one of which is likely considered a regulated ditch.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, work will take place in and adjacent to some wetland areas and drainage ditches.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Approximately 133,813 square feet of low functioning, primarily category IV wetland will be filled along with approximately 6,705 lineal feet of ditch.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Portions of existing wetlands and ditches will be removed/relocated as part of the proposed development.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes, a portion of the southeast corner of the site is located in Zone AE and Zone X per FIRM map panel 5301021782C dated July 17, 2006. An application for a letter of map revision has been submitted to the US Army Corps of Engineers for review

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No waste materials will be discharged to surface waters.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Dewatering may be required to withdraw groundwater during construction. Water will not be discharged to groundwater under this proposal.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . .; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste materials will be discharged to the ground.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Source of runoff will be rainfall from building roof top and asphalt areas. In existing conditions, stormwater runoff does not infiltrate. With development, stormwater will be collected via storm pipes and catch basins and routed to a detention pond prior to release through a modular wetland system for water quality treatment and into an existing drainage ditch on the western border of the site to maintain the existing downstream hydrology. Because the site does not infiltrate, it is not anticipated that the development will meaningfully impact the surrounding groundwater elevations.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials will enter ground or surface waters.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No. Stormwater will be routed for discharge to an existing drainage ditch located on the western boundary of the site in order to maintain existing drainage patterns.

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

A storm drainage plan will be designed and per City of Chehalis requirements, will meet applicable sections of Lewis County code to control runoff water impacts from the proposal.

#### 4. Plants

- a. Check the types of vegetation found on the site:

deciduous tree: alder, maple, aspen, other  
 evergreen tree: fir, cedar, pine, other  
 shrubs  
 grass  
 pasture  
 crop or grain  
 orchards, vineyards or other permanent crops.  
 wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other  
 water plants: water lily, eelgrass, milfoil, other  
 other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

Hay crop vegetation onsite (grasses) and some wetland plants located within the project footprint are proposed to be removed.

- c. List threatened and endangered species known to be on or near the site.

No threatened or endangered species or plants are known to be on or near the site.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Native wetland plants will remain in wetlands to be preserved.

- e. List all noxious weeds and invasive species known to be on or near the site.

Non-native, invasive reed canarygrass is found on the site.

## 5. Animals

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

  X   birds: hawk, heron, eagle, songbirds, other: \_\_\_\_\_  
       mammals: deer, bear, elk, beaver, other: \_\_\_\_\_  
       fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

Some birds such as red-tailed hawk, songbirds, and turkey vulture were observed flying overhead but no other animals have been observed on site by SVC staff.

- b. List any threatened and endangered species known to be on or near the site.

Puget Sound Chinook Salmon (*Oncorhynchus tshawytscha*), Puget Sound Steelhead Trout (*Oncorhynchus mykiss*), Bull Trout (*Salvelinus confluentus*), Canada Lynx (*Lynx canadensis*), Gray Wolf (*Canis lupus*), Northern Spotted Owl (*Strix occidentalis caurina*), Marbled Murrelet (*Brachyramphus marmoratus*), Streaked Horned Lark (*Eremophila alpestris strigata*), Yellow Billed Cuckoo (*Coccyzus americanus*), Oregon Spotted Frog (*Rana pretiosa*) have all been listed for endangered or threatened species potentially found in Lewis County. No endangered or threatened species are known to be on or near the site.

- c. Is the site part of a migration route? If so, explain.

No aquatic migration routes have been observed on the site. The site is part of the Pacific Flyway for Migratory Birds.

- d. Proposed measures to preserve or enhance wildlife, if any:

The Chehalis Basin Wetland Mitigation Bank will be utilized in order to fully compensate for any impacts to wildlife habitat associated with wetland fill on the site.

- e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to be on or near the site.

## 6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.



Natural gas will be used for heating and electricity will be used for lighting and overall energy needs.

- b. Would your project affect the potential use of solar energy by adjacent properties?  
If so, generally describe.

It is not anticipated that the project will affect the use of solar energy by adjacent properties.

- c. What kinds of energy conservation features are included in the plans of this proposal?  
List other proposed measures to reduce or control energy impacts, if any:

The project will be designed to comply with current Washington State energy code requirements.

## 7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?  
If so, describe.

No.

- 1) Describe any known or possible contamination at the site from present or past uses.

None is present; see Phase I and II Environmental Site Assessments.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

A gas transmission line is located offsite at the southwest corner of the site but would not be expected to negatively affect the proposed development.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

During construction, chemicals associated with construction activities would be present. The contractor will be responsible for a spill pollution and prevention plan throughout duration of construction. Upon project completion, it is not anticipated that hazardous chemicals would be present.

- 4) Describe special emergency services that might be required.

Other than police, fire, and medical services already available in the area, no special emergency services are anticipated.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

The contractor will implement spill pollution and prevention measures during construction. No other specific measures are proposed.

- b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Noise from vehicular traffic on area roadways would be present but would not be anticipated to affect the proposed project.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

On a short-term basis, noise from construction equipment would be present from approximately 7 am to 6 pm, Monday – Friday. Upon project completion, noise generated from traffic to and from the site would be present daily as would noise associated with operation of the warehouse distribution center.

- 3) Proposed measures to reduce or control noise impacts, if any:

Construction equipment will operate only during the hours of 7 am to 6 pm, Monday through Friday to help control impacts to nearby residential areas. A Noise Study is being completed for the proposed use and recommended mitigation measures to reduce noise from operations to authorized levels will be incorporated into final project design if identified. The project will also comply with state noise regulations (WAC 173-60).

## 8. Land and shoreline use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is currently managed for agricultural production and occasionally used for livestock grazing. Adjacent properties to the south and east of the site are undeveloped, but also zoned for Light Industrial uses. Properties located across Jackson Highway from the project site to the north are developed with existing single-family homes; however, the vast majority of the existing homes are nonconforming uses as the underlying properties are currently zoned General Commercial.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

Yes, the site has been used for agricultural production and will be converted to industrial warehouse use under the proposed development. No agricultural lands of long-term significance will be converted. The properties were removed from current use agricultural tax status in 2021.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

- c. Describe any structures on the site.

The site contains a double-wide mobile home and several pole barns and farm use buildings.

- d. Will any structures be demolished? If so, what?

All structures will be removed for construction of the proposed development.

e. What is the current zoning classification of the site?

The current zoning is Light Industrial (IL).

f. What is the current comprehensive plan designation of the site?

The current comprehensive plan designation is Industrial.

g. If applicable, what is the current shoreline master program designation of the site?

N/A

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes, the onsite wetlands (Wetlands A – X) which are low-functioning Category III and IV depressional or slope wetlands and one drainage ditch conveying natural flows are located on the site. All remaining ditches are artificially created apparently in uplands for the purposes of conveying surface runoff and seasonal high groundwater. One ditch conveying natural flow, including Ditch 1 (Type Ns stream) was identified with direct surface connectivity to downstream waters associated with Berwick and Dillenbaugh Creeks located off site. See Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan (Soundview Consultants).

i. Approximately how many people would reside or work in the completed project?

Approximately 300 to 600 employees are anticipated to work at the proposed facility.

j. Approximately how many people would the completed project displace?

No persons will be displaced as a result of development of this site.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The warehouse use building is a permitted use in the zoning designation and will be designed and constructed to meet City of Chehalis zoning and development plans, codes, and standards.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

No specific measures are proposed.

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing is proposed.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

One vacant single-family residence will be eliminated.

- c. Proposed measures to reduce or control housing impacts, if any:

None.

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed building will be no more than 50-feet high at its highest point. Concrete tilt-up construction is proposed. See Clayco Renderings for additional detail.

- b. What views in the immediate vicinity would be altered or obstructed?

Some existing views from adjacent single-family residences will be altered as a result of the proposed development; however, as noted above, the vast majority of these residences are non-conforming uses in the underlying General Commercial zoning district.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

The building will comply with City of Chehalis bulk and density requirements for the IL zoning district, and the installation of new perimeter and interior landscaping will provide a visual buffer for the proposed project from Jackson Highway.

## 11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Glare from building window glass could be present during daylight hours and light from building and parking lot lighting will be present during hours of darkness.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

It is not anticipated that any potential light or glare produced by the proposed development would be a safety hazard. All lighting fixtures and parking lot lighting will be installed and directed into the site so no traffic hazard would be created. Light and glare is not expected to interfere with views due to project compliance with City regulations.

- c. What existing off-site sources of light or glare may affect your proposal?

Headlights from vehicular traffic on adjacent roads would be present but would not be expected to affect the proposed development.

- d. Proposed measures to reduce or control light and glare impacts, if any:

The window glass used in the building will be non-glare and parking lot lighting will be shielded and directed towards the project site. The use of onsite landscaping will also help to contain any

light produced by the development. The project will comply with all requirements for parking lot lighting in Chehalis Municipal Code 17.84.080

## **12. Recreation**

- a. What designated and informal recreational opportunities are in the immediate vicinity?

Newaukum Valley Golf Course is located approximately 1.5 miles south of the site along Jackson Highway and Chehalis Middle School is located approximately 2.5 miles northwest of the site.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No recreational uses will be displaced.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No specific measures are proposed.

### 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

One historic structure is located on the site. The manufactured home on the site was constructed in 1970 and per the Cultural Resources Assessment prepared by Cultural Resource Consultants (CRC) would recommend it not eligible for listing on historic registers. Refer to the Cultural Resources Assessments prepared by CRC for additional information.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

A Cultural Resources Assessment was prepared by CRC in 2015 and updated in 2021. Two precontact archaeological sites (45LE913 and 45LE1062) and seven archaeological isolates (45LE914, 45LE915, 45LE916, 45LE917, 45LE 918, 45LE1060 and 45LE1061) were identified. The archaeological isolates were recommended not eligible for historic registers.. The project has been re-designed to avoid disturbance of sites 45LE913 and 45LE1062. Refer to the Cultural Resources Assessments prepared by CRC for additional information.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

CRC's Cultural Resources Assessment included review of project information and correspondence provided by the project proponent; correspondence with Tribes with an interest in the project area; examination of local environmental, historical, and archaeological datasets; and field investigations. Field investigations consisted of pedestrian survey, documentation of historic built environments, and excavation of shovel probes. Refer to the Cultural Resources Assessments prepared by CRC for additional information.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

CRC's assessment recommended that further testing be conducted at the two archaeological sites to evaluate them for historic register eligibility in the event that redesign to avoid the sites was not feasible. No further investigation was recommended for the archaeological isolates because they do not meet eligibility criteria. Because the project will require permitting by the Corps and associated consultation under Sec. 106, CRC has prepared a treatment plan the two archaeological sites to be reviewed and approved by the Corps. In addition, the project has

been re-designed to avoid disturbance of both identified sites (45LE913 and 45LE1062). Refer to the Cultural Resources Assessments prepared by CRC for additional information.

#### 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Access to the site is proposed via two driveways onto Jackson Highway. A potential access to Rush Road through Port of Chehalis property directly adjacent to the west has been evaluated; however, the Applicant does not have legal access over and across the Port of Chehalis property at this time..

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The site is served by Twin Transit with the nearest stop at approximately the intersection of Rush Road and Maurin Road to the north of the site.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Approximately 405 vehicular parking stalls and 392 trailer parking stalls are proposed. No parking will be eliminated.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

. The project will construct a left-turn lane on Jackson Highway at Rush Road and a two-way left turn lane along the length of the site's frontage in accordance with Lewis County standards. Bus pullouts will be constructed along Jackson Highway on the site frontage in coordination with Twin Transit and Lewis County. See Revised Traffic Impact Analysis for additional details.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The fully constructed project is estimated to generate approximately 1,400 average weekday daily trips with 80 trips occurring in the AM peak commute hour and 100 trips in the PM peak commute hour. Peak activity levels for high-cube industrial warehouse facility typically occur between 9:00 – 10:00 AM and between 3:00 – 4:00 PM. Approximately 20-25% of total site-generated traffic may be in the form of heavy vehicles. Data were obtained through the ITE Trip Generation Manual, 10th Edition. Please refer to the Revised Traffic Impact Analysis prepared by Heath & Associates, Inc..



- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

It is not anticipated that any working farm or forest lands on area roads would be affected by the proposed development.

- h. Proposed measures to reduce or control transportation impacts, if any:

The above roadway improvements will mitigate transportation impacts of the project. See Revised Traffic Impact Analysis.

### 15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The project will increase the need for police, fire, and medical services.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

The project will be developed in accordance with applicable County and City standards to meet fire requirements. Additional tax revenue generated by construction and development of the project will allow for development of additional public service capacity if required.

### 16. Utilities

- a. Circle utilities currently available at the site:

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

|                 |                  |
|-----------------|------------------|
| Power:          | Lewis County PUD |
| Natural Gas:    | PSE              |
| Water           | City of Chehalis |
| Sanitary Sewer: | City of Chehalis |
| Telephone:      | CenturyLink      |
| Cable:          | Comcast          |
| Refuse Service  | LeMay, Inc.      |

### C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:  \_\_\_\_\_

Name of signee: Ben Eldridge, P.E.

Position and Agency/Organization: Senior Project Engineer, Barghausen Consulting Engineers

Date Submitted: October 15, 2021 / Revised February 25, 2022 / Revised March 18, 2022

**Attachment 6**

Technical Memorandum – Response to SEPA Comments  
Prepared by Soundview Consultants dated February 24, 2022



## Soundview Consultants LLC

Environmental Assessment • Planning • Land Use Solutions

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# Technical Memorandum

**To:** Joel Molander, Puget Western, Inc. **Project Number:** 1244.0001  
**From:** Racheal Villa, Soundview Consultants LLC **Date:** February 24, 2022  
Rachael Hyland, Soundview Consultants LLC  
Kyla Caddey, Soundview Consultants LLC  
**Re:** Response to SEPA Comments Re: Jackson Highway, Chehalis, WA 98532

Dear Mr. Molander,

Soundview Consultants LLC (SVC) has been assisting Puget Western, Inc. (Applicant) with permitting support for the proposed industrial development of an approximately 69.42-acre site located at 2844 Jackson Highway in the City of Chehalis, Washington. This Technical Memorandum has been prepared in response to public comments made on the SEPA checklist by Jennifer S. Robertson of Inslee Best law firm dated November 8, 2021. The public comments are summarized below (italicized) followed by SVC's responses.

1. *Nearby residents are expressed concerns regarding the fill of wetlands, some of which are considered mosaic.*

The term wetland mosaic typically has two contexts. The first context is for delineation purposes in which an area is so interspersed with wetland and upland there is no realistic way in which it could be delineated accurately, typically in areas with extremely hummocky topography. When this happens, the outermost edge is determined, and a series of data plots located in a point intercept fashion are collected. Then a percentage of wetland/upland is determined based on the ratio of in and out plots. This context does not apply in this situation as distinct boundaries could be identified and accurately determined. The second context of a mosaic wetland is in terms of function, such that small wetlands, that are in close proximity to one another, may provide a higher level of function when assessed together as a single unit. Typically, these mosaics consist of several small wetlands.

Local jurisdictions typically have code following state and federal guidelines; however, in this particular case, the City of Chehalis has come up with their own definition of a wetland mosaic. According to Chehalis Municipal Code (CMC) 17.21.030, a wetland mosaic is defined as "two or more wetlands that are less than 100 feet apart such that within the outer boundaries of the area delineated as wetland and the associated upland between the wetlands more than 50 percent of the total area is comprised of wetlands and open water as defined by the OHWM".

Utilizing the City's definition of a wetland mosaic, Wetlands C, I, J, K, T, U, V, W, and X would not be considered part of mosaics because they are situated more than 100 feet from any other

wetland. The following wetlands would be grouped together as mosaics based on proximity to other wetlands:

- Wetlands A/B
- Wetlands D/E/F/G/H/Y
- Wetlands L/M/N/O
- Wetlands P/Q
- Wetlands R/S

It is presumed that all these wetland groups would consist of greater than 50% wetland area. It should be noted that the City does not indicate whether or not mosaics must be rated together as a single unit, or if this is simply a descriptive term.

However, according to CMC 17.21.010.B.5, the City accepts the use of best available science, and in this case, the 2014 Wetland Rating Manual provides the best available science for assessing wetland mosaics. As such, the site was re-evaluated for mosaics utilizing the 2014 Wetland Rating Manual for Western Washington, which states that in order to be considered a mosaic, a wetland must meet all of the following requirements:

1. Each patch of wetland is less than 1 ac (0.4 ha), AND
2. Each patch is less than 100 ft (30 m) away from the nearest wetland, AND
3. The total area delineated as vegetated wetland is more than 50% of the total area of wetlands and uplands, open water, and river bars around which you can draw a polygon, AND
4. There are at least three patches of wetland that meet the size and distance thresholds.

As is evidenced above, the City's definition of a mosaic is a stark contrast to Washington State Department of Ecology's (DOE) wetland rating manual's definition as it requires fewer wetlands (2 rather than 3) and also does not indicate a size threshold of less than 1 acre. The concept of a wetland mosaic typically applies to smaller wetland areas because the rating methodology is designed to accurately evaluate larger wetland areas and tends to undervalue small wetlands as low functioning when assessed individually. However, when there are multiple small wetlands in close proximity to one another, together, the larger wetland complex provides a higher level of function. Therefore, the City's definition of a wetland mosaic is much broader, and appears to include larger wetland areas (i.e. wetlands over 1 acres) that are likely already being properly evaluated as a single wetland unit. Furthermore, the requirement of only two wetlands, versus the typical three or more, also results in more areas being evaluated as mosaic as it becomes easier to meet the 50% wetland polygon threshold when only two wetland areas are needed. Overall, the City's interpretation of a wetland mosaic results in more areas, which may already be properly assessed utilizing a typical individual rating methodology, being considered mosaic, and does not appear to meet the true intention of a wetland mosaic rating as stated in the wetland rating manual.

As the 2014 Wetland Rating Manual is the best available science, this is the approach that should supersede the City's definition of a mosaic. Therefore, utilizing the rating guidance, based on the size threshold alone, Wetlands E and F are disqualified as they are each over 1 acre in size. Similarly, Wetlands C, D, I, J, K, T, U, V, W, and X are also disqualified as they are more than 100 feet away from any nearby wetlands that meet the size threshold. This leaves Wetlands A, B, G, H, L, M, N, O, P, Q, R, and S as meeting the potential size and proximity requirements in some

capacity. Utilizing the 100 -foot radius and 3 or more wetlands cluster requirement, only one potential wetland mosaic exists (Wetlands L, M, N, and O). The combined wetland area for the Wetlands L, M, N, and O is 6,237 square feet. Therefore, in order to meet mosaic criteria, when a polygon is drawn around the outside of the wetland shapes, the total number must not exceed 12,474 square feet. A preliminary calculation shows that, depending on how this polygon is drawn, the overall area is approximately 11,000 square feet, which equates to approximately 57% wetland, and would satisfy all four of the identified wetland mosaic criteria.

Utilizing the guidance regarding wetland mosaics, these four wetlands can be rated as one unit. However, given the general uniformity of wetlands onsite, their small size, and lack of habitat features, the wetland mosaic L/M/N/O will also rate as a Category IV wetland, resulting in no change overall to ratings. This wetland mosaic is not anticipated to have any effect on the project as the proposed land use is in aligned with the underlying zoning requirements per CMC 17.21.070.A. Alterations of the critical areas are allowed per CMC 17.21.070.B.3, and mitigation sequencing as well as appropriate mitigation compensation is proposed in accordance with section CMC 17.23.053. Therefore, despite the presence of a single wetland mosaic in the southern portion of the site, the project is still in compliance with local, state, and federal regulations.

- 2. There are 25 potentially regulated wetland areas and five agricultural ditches (unconnected waterways), one of which is likely a regulated body of water under state and federal law. A critical area study is required under Section 17.23.020.A of the Chehalis Municipal Code (“CMC”). Such study must meet the standards of CMC 17.21.082. Protection of the buffers is also important to environmental health of these critical areas and as wildlife habitat. Although the applicant provided a study, it is illogical to conclude that there are not probable significant adverse environmental impacts from adding approximately 55 acres of impervious surface to this 69-acre open-space property which contains significant critical areas. The filling of the wetlands and the hydrology of how that much impervious surface will impact the remaining wetlands, watercourse, adjacent rights-of-way and neighboring properties needs a full environmental review by way of an Environmental Impact Statement (hereinafter “EIS”). Such review must also examine the impacts of noise, light, and activity upon the wetlands and the wildlife that rely on them. **The project impacts on wildlife, both local and the many endangered or threatened species that are on or near this property, also needs further study.***

This project is under review by local as well as state and federal entities. SVC has submitted a Wetland, Fish, and Wildlife Habitat Assessment Report for review as part of the application materials which addresses critical area inventories regarding fish and wildlife habitat (WDFW Salmonscape and PHS). A joint public notice issued by USACE and DOE dated November 24, 2020 states that “preliminary determination indicates that the activity would not affect endangered or threatened species, or their critical habitat. Consultation under Section 7 of the ESA is not required”. As such, no further study regarding threatened and endangered is required at this time. A copy of the notice is included in Attachment B. As the Applicant has been working closely with the City as well as state and federal regulatory agencies, the proposed project has been designed to be in accordance with the City’s code requirements.

- 3. Finally, these wetlands likely keep flooding from occurring nearby. Paying into a wetland banking system will not help the habitat, critical areas, wildlife, or hydrology of this property and its surroundings. Thus, the impacts of removing the wetlands and other pervious ground from this basin need further study by way of an EIS.*

The project proposes to utilize an approved mitigation bank. Joint USACE and EPA rules (USACE & EPA, 2008) and interagency guidance (WSDOE & USACE 2006; Hruby et al., 2009)

have been established that require more careful mitigation planning efforts utilizing a watershed approach in site selection, establishment of enforceable performance standards, and preference for use of mitigation banks or ILFs wherever possible. The subject property is currently located within the CBWMB's Service Area, thus allowing for the proposed project to utilize the approved mitigation banking program for compensatory mitigation within the same watershed as project impacts. Refer to Appendix A for the Mitigation Bank Service Area map. The overarching goals of the CBWMB are to improve hydrologic, water quality, and habitat functions at the Hanaford Valley site; and provide a self-sustaining wetland and stream complex that will not require continued maintenance by re-establishing, rehabilitating, and enhancing forested, scrub-shrub, and emergent wetlands and associated upland habitats. The purchase of mitigation banking credits will allow for the proposed project to achieve no net loss of wetland functions in the Upper Chehalis watershed.

The CBWMB, administered by WCEI Chehalis MB LLC creates a "comprehensive, equitable, and consistent" program to ensure successful mitigation actions. Oversight of this mitigation banking program is provided by an Interagency Review Team (IRT) that includes representatives from the USACE, WSDOE, tribes, and other federal, state, and local regulatory agencies.

In addition, for small wetlands permittee-responsible mitigation is not as ecologically beneficial due to the size of the wetland created and lack of watershed benefits when compared to purchasing wetland bank credits. Invasive species management may also be a limiting factor for permittee-responsible mitigation. These problematic issues can easily be alleviated through mitigation bank programs where the mitigation is done on a large scale and the benefits of the purchased credits provide watershed scale benefits, with longer term maintenance and management than permittee-responsible mitigation. As such, the purchase of mitigation bank credits from the CBWMB will provide the best mitigation solution that will result in an ecological lift when compared to the degraded condition of the wetlands proposed to be filled.

We trust this clarifies this concern. Please do not hesitate to contact us with any questions or concerns you may have.

Sincerely,



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- Chehalis Municipal Code (CMP). 2021. Title 17 – Uniform Development Regulations. Website: <https://www.codepublishing.com/WA/Chehalis/#!/Chehalis17/Chehalis17.html>. Current through June 28, 2021.
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# Attachment A – Alternatives Analysis

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**ALTERNATIVES ANALYSIS – CLEAN WATER ACT  
SECTION 404(B)(1) DOCUMENTATION**

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**JACKSON HIGHWAY**

APRIL 2021



**Soundview  
Consultants**  
Environmental Assessment  
Planning + Land Use Solutions

# ALTERNATIVES ANALYSIS – CLEAN WATER ACT SECTION 404(B)(1) DOCUMENTATION

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## JACKSON HIGHWAY

APRIL 30, 2021

### PROJECT LOCATION

2844 JACKSON HIGHWAY  
CHEHALIS, WASHINGTON 98532

### PREPARED FOR

PUGET WESTERN, INC.  
19515 NORTH CREEK PARKWAY  
SUITE 310  
BOTHELL, WASHINGTON 98011-8200

### PREPARED BY

**SOUNDVIEW CONSULTANTS LLC**  
2907 HARBORVIEW DRIVE  
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**Soundview  
Consultants**  
Environmental Assessment  
Planning + Land Use Solutions

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# Chapter 1. Introduction

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This Alternative Analysis has been written to meet regulatory guidelines established by the Environmental Protection Agency (EPA) under Section 404(b)(1) of the Clean Water Act (CWA), which requires an analysis of all apparent reasonable alternatives or a reasonable range of alternatives when actions are proposed actions are proposed within Waters of the United States (WOTUS) (EPA, 2010; EPA, 2019). This analysis concludes that the Preferred Alternative is the least environmentally damaging practicable alternative; no other practicable alternative has been identified that would achieve the purpose and need and have a less adverse impact on the aquatic ecosystem.

The purpose of the proposed project is to develop a warehouse distribution center to serve growing populations along the I-5 corridor and to contribute to local economic development goals. Lewis County is located along the I-5 corridor between growing populations in the Seattle-Tacoma and Vancouver-Portland areas. In 2005 an economic analysis concluded that there was a shortage of industrial lands in Lewis County, presenting a challenge to the creation of family-wage jobs. The City of Chehalis is the second largest incorporated city in Lewis County, and the Port of Chehalis recently renewed the Regional General Permit 9 (RGP-9) with USACE to support the creation of shovel-ready, industrial jobs within the Port District (ELS, 2017). Due to the presence of a mapped floodplain onsite, the proposed project likely does not meet the requirements of the RGP-9. A Letter of Map Revision (LOMR) application is currently under review. However, the purpose of the proposed project meets the need for industrial development in Lewis County as stated during the RGP-9 renewal process. This alternatives analysis therefore incorporates the components of project need and geographic area and some components of project criteria and potential alternative sites from the alternatives analysis developed for the RGP-9.

Potential alternative sites within the Port of Chehalis district and within the RGP-9 Preferred Alternative were assessed. Potential alternative sites were assessed on the basis of site and logistics criteria, including a site of at least 50 acres located in the City of Chehalis UGA. Several potential alternative sites were determined to be not practicable for the proposed project. Three potential alternatives were determined to be practicable, including the Preferred Alternative and development of a warehouse distribution center on Site 8 (Alternative 3). The proposed project consists of the development of a single loading and unloading distribution center with associated loading docks, parking facilities, and a stormwater detention facility. Under the No Action Alternative (Alternative 1), the proposed project would not be developed due to distribution of wetlands around the periphery of the site, which any access into and industrial development on the site could not feasibly avoid. The No Action Alternative is therefore considered not to be a practicable alternative. Under the Preferred Alternative (Alternative 2), the Applicant would develop a 1,001,615-square-foot warehouse distribution center with loading docks, trailer stalls, paved areas for parking, truck and van loading, and maneuvering, and stormwater infrastructure. Ingress and egress to the site will be provided via entrances and exits along Jackson Highway on the northeastern portion of the subject property. The Preferred Alternative requires the direct impacts to 133,813 square feet (3.071 acres) of low functioning, primarily Category IV wetlands and approximately 6,705 linear feet of ditch. In addition, approximately 12,399 square feet (0.284 acres) of indirect wetland impacts and 2,258 square feet (0.051 acre) of stream buffer impacts are also unavoidable. Under Alternative 3, Site 8 would be developed for the proposed 1,001,615-square-foot warehouse distribution center and associated infrastructure. Two mapped stream channels are located on Site 8. To meet the proposed project purpose of a warehouse distribution center, the project will develop one large building that facilitates the transfer

of goods to and from large vehicles. To avoid direct impacts to the two mapped stream channels onsite, the proposed project would be required to centrally located the warehouse distribution center onsite, resulting in direct impacts of up to 10.9 acres of potential wetlands mapped onsite. Site 8 has not been identified as available, and the site consists of four tax parcels that would have to be acquired in order provide a suitable site. However, Site 8 was considered for environmental analysis in the event that it was to become available. Relative to the Preferred Alternative, development of Site 8 (Alternative 3) would likely require greater environmental impacts. As such, the Preferred Alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA).

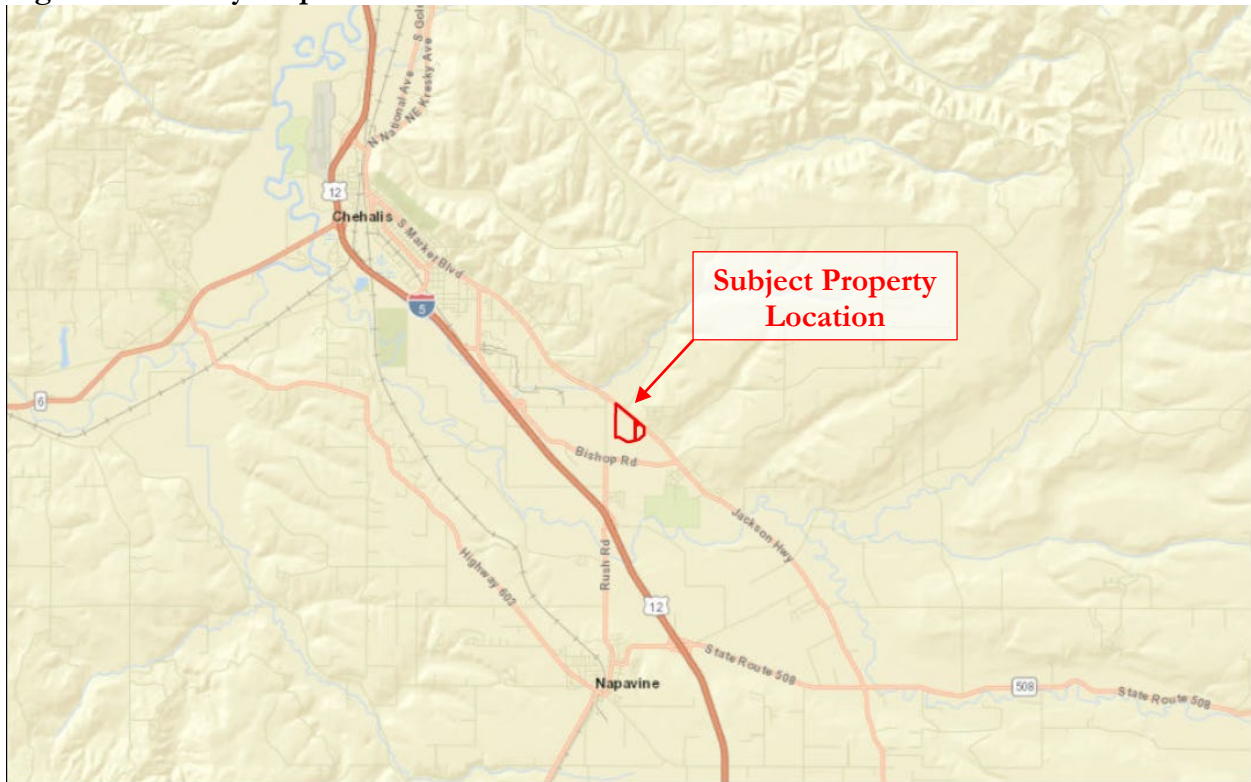
The scope of this document includes activities proposed on the Applicant's project area (the Jackson Highway site). Please see the *Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan*, and Joint Aquatic Resources Permit Application (JARPA), prepared by Soundview Consultants LLC (SVC) and submitted under separate cover, for a thorough project description and plans.

This Alternatives Analysis document, required under Section 404(b)(1) of the CWA, has been prepared to evaluate practicable alternatives that achieve the purpose and need relative to their anticipated impacts to the aquatic environment. Included in this analysis is a presentation of basic and overall purpose and need for the project, identification of the geographic area, description of potential alternatives for the proposed project, and environmental analysis of the potential alternatives. The preferred alternative identified by this document is the project description presented in the *Wetland and Fish and Wildlife Habitat Assessment Report and Conceptual Mitigation Plan* and JARPA referenced above. The proposed fill of WOTUS exceeds the thresholds for a nationwide permit (e.g., Nationwide Permit 39 – Commercial and Institutional Development); therefore, an individual permit under Section 404 of the CWA will be required.

Puget Western LLC is the applicant for aquatic resource permits under the Federal regulations, and all other local, state, and federal regulatory programs. The contact at Puget Western is Joel Molander, (425)-765-8002, joel.molander@pugetwestern.com.

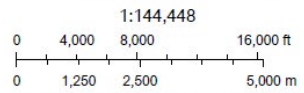
The Agent for permitting purposes is Racheal Villa at Soundview Consultants LLC, (253) 514-8952, racheal@soundviewconsultants.com.

Figure 1. Vicinity Map.



4/19/2020, 10:09:01 PM

 Statewide Parcels



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Soundview Consultants



# Chapter 2. Project Purpose and Need

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## 2.1 Statement of Need

Lewis County is a rural county located along the I-5 corridor between growing populations in the Seattle-Tacoma and Portland-Vancouver areas. The following excerpt from the RGP-9 identifies the need for family-wage jobs within the county:

*“The Port of Chehalis is one of two ports in Lewis County, a rural county that continues to struggle to achieve economic vitality. According to the Washington State Employment Security Department, the number of Lewis County jobs, 22,299 in 2016, was a net increase of just 1 percent since 2010 (Matayoshi 2016, WSESD 2016). During that same period, the state had a net gain in job growth of 10.4 percent indicating a disparity between urban and rural economic development. A 2005 economic analysis, which is still considered relevant in 2017, identified a substantial shortage of industrial land in Lewis County. The county is in need of family-wage jobs, which could be provided through industrial development in the Port’s district. However, there is a deficit of industrial land without wetlands or floodplain constraints. This deficit ranges from 421 acres using an analysis of historical trends, to 2,583 acres applying an economic emphasis.” (ELS, 2017)*

## 2.2 Statement of Purpose

### 2.2.1 Basic Purpose

The basic purpose of this project is to develop a new warehouse distribution center. The basic purpose of this project is not water-dependent, and therefore, does not require location on or adjacent to a special aquatic site.

### 2.2.2 Overall Purpose

The overall purpose of this project is to construct a new warehouse distribution center facility to serve growing populations along the I-5 corridor and support job growth in Lewis County. The overall purpose meets the need for industrial development and family-wage jobs that was identified in the RGP-9 for the Port of Chehalis. As such, the Port of Chehalis District was selected as the geographic area to consider alternatives that meet the project need and criteria.

## 2.3 Consideration of Special Aquatic Sites

The proposed project area for the Preferred Alternative is undeveloped and has been used for agriculture for many decades. The site contains twenty-five potentially regulated wetlands and five agricultural ditches, one of which is likely considered a regulated waterbody. The wetlands and ditches provided relatively low functional values and limited habitat (SVC, 2020a). The proposed project is not water-dependent and does not require situation adjacent to a special aquatic site. The proposed project requires wetland fill due to the scattered and centrally located wetlands and large spatial requirements of industrial development. Compensatory mitigation for the proposed wetland impacts will be provided through the purchase of credits from the Chehalis Basis Wetland Mitigation Bank (CBWMB).

## Chapter 3. Alternatives Analysis

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This Alternatives Analysis, required under section 404(b)(1) of the Clean Water Act, has been prepared to identify and evaluate practicable alternatives that may be less environmentally damaging than the discharge of material (in this case, placement of fill) into Waters of the U.S.

### 3.1 Project Criteria

The proposed project includes several site constraints and logistical requirements to determine if an alternative is practicable, which are discussed in detail below.

#### Site Constraints

Site size is a critical factor for site selection as the proposed project requires a cohesive large building with loading and unloading areas, parking areas, and stormwater facilities to provide distribution services. A minimum contiguous site of 50 acres is needed to develop the proposed distribution center. An industrial site will generally need existing sufficient infrastructure to support industrial development or be capable of being connected to existing infrastructure. Slopes greater than 15 percent require substantial earth work and can pose environmental hazards from soil erosion, increased runoff, and soil stability problems (ELS, 2017). In addition, the majority of the site should be vacant and undeveloped to minimize redevelopment costs and impacts on existing developed areas.

#### Logistics and Costs Factors

*Located within the City of Chehalis Urban Growth Area (UGA):*

The purpose of UGAs is to encourage urban growth within designated areas. Growth outside of UGAs is only intended to occur if it is not urban in nature, and state law prohibits the extension of water and sewer lines to areas outside of UGAs. Any industrial development located outside of the existing UGA boundaries would therefore be required to seek a UGA expansion and a Lewis County Comprehensive Plan Amendment to allow for this urban development. The Chehalis River Basin is closed to new water rights, and the City of Chehalis would also be required to amend their Water System Plan and General Sewer Plan and receive state approvals before the areas could be served. Any sites outside of the City of Chehalis UGA would require substantial logistical challenges in expanding the UGA to serve industrial development. Expansion of the UGA requires demonstration that there is insufficient vacant land that is industrially zoned within the current UGA to meet anticipated growth and economic needs. Meeting this requirement would be challenging due to the existing quantities of vacant industrial land in the City of Chehalis UGA (ELS, 2017).

*Infrastructure:*

Industrial development requires substantial infrastructure, and potential industrial sites must be capable of being added and/or connected to existing infrastructure.

*Less than 10 miles or 15 minutes driving time of Interstate 5:*

Proximity to Interstate 5 is necessary for a distribution center. Close proximity to a major highway enables transportation efficiencies and reduces transportation costs by maximizing highway travel time.

### **3.2 Potential Alternative Sites**

The purpose of the proposed project is to construct a new warehouse distribution center facility to serve growing populations along the I-5 corridor and support job growth in Lewis County. The proposed project will fulfill the need for industrial development stated in the Port of Chehalis RGP-9 alternatives analysis, and the geographic area for the proposed project is considered to be the same area as for the RGP-9 alternatives analysis. This alternatives analysis summarizes the potential alternative areas for industrial development from the RGP-9. The RGP-9 alternatives analysis identified a Preferred Area within the Port of Chehalis as the LEDPA for industrial development within the Port District. This alternatives analysis identifies several potential sites within the RGP-9 Preferred Area that may serve as alternative sites for the proposed project. Current site availability within the RGP-9 Preferred Area was assessed using MLS.com, Zillow.com, landwatch.com, and landandfarm.com. Potential critical area presence was assessed using the United States Fish and Wildlife Services National Wetland Inventory (NWI) map and the Washington State Department of Natural Resources (DNR) stream typing map.

#### Port of Chehalis RGP-9 Alternatives

##### *Preferred Area*

The Preferred Area consists of approximately 1,860 acres located southwest of the City of Chehalis city limits and north of the Newaukum River. The City of Chehalis, Lewis County, and the State of Washington have long planned this area to support industrial development (ELS, 2017).

##### *West Newaukum Area*

The West Newaukum Area consists of approximately 789 acres located west of I-5 and southwest of the City of Chehalis. The West Newaukum Area was determined not to be a practicable alternative because it would require substantial infrastructure improvements, resulting in exorbitant costs and unavoidable environmental impacts. The analysis of environmental impacts resulting from the potential industrial development in this area concluded that there was a potential for greater impacts to critical areas in this area than in the Preferred Area (ELS, 2017).

##### *East Newaukum Area*

The East Newaukum Area consists of approximately 1,743 acres located east of I-5 and southwest of the City of Chehalis. The East Newaukum Area was determined not to be a practicable alternative because it would require substantial infrastructure improvements, resulting in exorbitant costs and unavoidable environmental impacts. The analysis of environmental impacts resulting from the potential industrial development in this area concluded that there was a potential for equal impacts to critical areas in this area than in the Preferred Area (ELS, 2017).

##### *North Fork Newaukum Area*

The North Fork Newaukum Area consists of 1,443 acres located east of I-5 and southeast of the City of Chehalis. The North Fork Newaukum Area was determined not to be a practicable alternative because it would require substantial infrastructure improvements, resulting in exorbitant costs and unavoidable environmental impacts. The North Fork Newaukum Area was additionally determined not to be practicable to the substantial feasibility obstacles that would be incurred in order to obtain water and sewer extensions for the site. The analysis of environmental impacts resulting from the potential industrial development in this area concluded that there was a potential for equal impacts to critical areas in this area than in the Preferred Area (ELS, 2017).

#### *Centralia Alpha East Area*

The Central Alpha East Area consists of 1,376 acres located east of I-5 and east of the City of Chehalis. The Central Alpha East Area was determined to be not to be a practicable alternative because it would require exorbitant infrastructure improvements and challenging feasibility obstacles in order to obtain water and sewer extensions for the site. The analysis of environmental impacts resulting from the potential industrial development in this area concluded that impacts to wetlands would be relatively low while impacts to streams, riparian areas, and wildlife habitats would be relatively high (ELS, 2017).

#### *Centralia Alpha West Area*

The Centralia Alpha West Area consists of 1,411 acres located east of I-5 and east of the City of Chehalis. The Centralia Alpha West Area was determined to be not to be a practicable alternative because it would require exorbitant infrastructure improvements and challenging feasibility obstacles in order to obtain water and sewer extensions for the site. The analysis of environmental impacts resulting from the potential industrial development in this area concluded that impacts to wetlands would be relatively low while impacts to streams, riparian areas, and wildlife habitats would be relatively high (ELS, 2017).

#### Port of Chehalis RGP-9 Preferred Area Alternatives

Potential alternative sites within the Preferred Area of the RGP-9 were selected on the basis of the large, vacant (i.e. minimally developed) seen on aerial imagery. Minimally developed sites were defined as sites that primarily consisted of large fields and generally lacked existing commercial development or large buildings.

#### *Preferred Site (69.64 acres total)*

- Lewis County Tax Parcel Numbers 017800001009 (56.310 acres), 017800001010 (12.330 acres), and 017800003000 (1 acre)
- Site availability: Site is owned by Applicant
- Site zoning: Light industrial
- Critical areas onsite:
  - 6.688 acres of wetlands and five agricultural ditches (one of which is likely considered a regulated waterbody) were delineated onsite (SVC, 2020)
- This site is owned by the Applicant, meets the project criteria and is considered practicable.

#### *Site 1 (20.67 acres total):*

- Lewis County Tax Parcels 017749000000 (3.970 acres), 017748000000 (6.580 acres), 017738000000 (10.120 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Approximately 25-50 percent of Site 1 is mapped as being encumbered by potential critical areas (one stream and wetlands)
  - The NWI map identifies one large potential large wetland complex originating offsite from the west and crossing the southern portion of Site 1.
  - The DNR stream typing map identifies a Type N stream feature running north to south through the center of the property and a Type F stream (Dillenbaugh Creek) running offsite along the southern boundary of the site.
- This site was determined to be not practicable as it is less than 50 acres in size. In addition, the triangular shape of the parcel would challenge site planning for a large warehouse distribution center building [which is rectangular] with associated loading docks, parking facilities, and a stormwater detention facility. The site is partially developed with power lines, which would further limit the space available for an industrial facility.

*Site 2 (8.220 acres total):*

- Lewis County Tax Parcel 017756002003 (8.220 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Less than 25 percent of Site 2 is mapped as being encumbered by potential critical areas (no streams; one wetland).
  - NWI maps one potential offsite wetland that extends onto a small section of the southwestern portion of the site.
- This site was determined to be not practicable as it is less than 50 acres in size. In addition, the triangular shape of the parcel would challenge site planning for a large warehouse distribution center building [which is rectangular] with associated loading docks, parking facilities, and a stormwater detention facility.

*Site 3 (36.50 acres total):*

- Lewis County Tax Parcels 017760002000 (9.580 acres), 017727002000 (1.070 acres), 017764000000 (2.570 acres), 017758002000 (23.280 acres)
- Site availability: Owned by the Port of Chehalis
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Approximately 25 percent of Site 3 is mapped as being encumbered by potential critical areas (one stream; one wetland).
  - NWI identifies one potential wetland in the center of the Site 3 connected to a potential stream feature running offsite to the west.
- This site was determined to be not practicable as it is less than 50 acres in size. In addition, the triangular shape of the parcel would challenge site planning for a large warehouse distribution center building [which is rectangular] with associated loading docks, parking facilities, and a stormwater detention facility. The site also is owned by the Port of Chehalis

and is partially developed with power lines and a stormwater pond, which would further limit the space available for an industrial facility.

*Site 4 (36.820 acres total):*

- Lewis County Tax Parcel 017775002000 (36.820 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Slightly greater than 25 percent of Site 4 is mapped as being encumbered by potential critical areas (two streams; wetlands).
  - The DNR stream typing map identifies two potential Type N stream features that originate on Site 4 and transition into one Type F stream offsite to the west.
  - NWI maps potential wetlands along the streams and an offsite wetland that extends onto the northeast corner of Site 4.
- This site was determined to be not practicable as it is less than 50 acres in size and is not identified as available.

*Site 5 (34.070 acres total):*

- Lewis County Tax Parcel 017800014003 (34.070 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Approximately 25 percent of Site 5 is mapped as being encumbered by potential critical areas (one wetland).
  - The NWI map identifies one potential wetland in the southern half of the site. This potential wetland crosses the site and extends offsite to the west and east.
- This site was determined to be not practicable as it is less than 50 acres in size and is not identified as available.

*Site 6 (38.43 acres total)*

- Lewis County Tax Parcels 017868007000 (0.680 acre), 017868010002 (28.720 acres), 017868006000 (0.290 acres), 017868004000 (6.740 acre), 017868010001 (2 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Less than 25 percent of Site 6 is mapped as being encumbered by potential critical areas (one stream and one wetland).
  - NWI identifies a small potential wetland in the northwest corner, a narrow onsite wetland feature running the length of the northern boundary and a potential offsite wetland that extends a slightly onto the northeastern corner of the site.
  - The DNR stream typing map identifies a Type F stream (Berwick Creek) running the length of the northern boundary.
- This site was determined to be not practicable as it is less than 50 acres in size. In addition, the site is encumbered by Berwick Creek, which runs along the northern portion of the site.

To form a rectangular site, the five tax parcels would have to be purchased. None of the parcels are currently listed as available.

*Site 7 (43.22 acres total)*

- Lewis County Tax Parcels 017859000000 (6.040 acres), 017860002000 (0.740 acre), 017861003000 (10.270), 017857002002 (20.130 acres)
- Site availability: Not listed as available, Parcel 017857002002 is owned by Port of Chehalis
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Site 7 is almost entirely unencumbered by mapped critical areas.
  - NWI identifies only two small areas where wetlands may be present: one small section in the northwest corner and one small section in the northeast corner of the site.
- This site was determined to be not practicable as it is less than 50 acres in size. To form a rectangular site, the four tax parcels would have to be purchased. None of the parcels are currently listed as available.

*Site 8 (88.09 acres total)*

- Lewis County Tax Parcel 017867005000 (18.490 acres), 017867010000 (25.000 acres), 017857003004 (39.2 acres), 017857003003 (5.40 acres)
- Site availability: Not listed as available
- Site zoning: Light industrial
- Mapped critical areas onsite:
  - Approximately 50 percent of Site 8 is mapped as encumbered by critical areas (two streams and wetlands).
  - NWI identifies two large wetlands following potential stream features through the central and southern portion of the site.
  - The DNR stream typing map identifies one Type U channel running through the western half of the property and one Type F stream running through the southern portion of the site.
- While this site is not listed as available, the site meets exceeds the 50-acre size criteria; however, it is encumbered by two centrally located mapped streams.

*Site 9 (41.2 acres total)*

- Lewis County Tax Parcel 017894004006 (41.2 acres)
- Site availability: Not listed as available
- Site zoning: General commercial
- Mapped critical areas onsite:
  - Site 9 is almost entirely free of wetlands onsite.
  - NWI identifies only small portions of larger wetlands extending onto the northern boundary, northwestern edge and southwestern edge of the site
  - The DNR stream typing map identifies a Type F stream running along the northern (Berwick Creek) and southern boundaries of the property.
  - Overall, the site is less than 25 percent encumbered.
- This site was determined to be not practicable as it is less than 50 acres in size. In addition, the site is zoned as “General Commercial,” so any industrial project would face the logistical challenge of rezoning.

### 3.2.1 Potential Alternative Sites Summary

Based on the criteria and evaluations above, several potential sites within the Port of Chehalis district were determined to not be practicable for the proposed project (sites outside of the Port of Chehalis Preferred Area and Sites 1-7 and 9). None of Sites 1-9 are listed as available based on searches of land and realtor websites. However, Site 8 meets the project criteria for a size of at least 50 acres and is further considered for environmental analysis in the event that the site were to become available.

### 3.3 Alternatives Descriptions

Three potential alternatives were identified for the proposed project.

#### *Alternative 1) No-Action Alternative*

Under the No Action Alternative, the Applicant would not develop the site any industrial facility. Due to the location of wetlands surrounding the periphery of the site, any proposed access to the site would not be able to avoid impacts to wetlands. In addition, wetland impacts could not be avoided while developing a sizeable industrial facility. To avoid wetland impacts, the Applicant would therefore choose not to develop the site. As such, the No Action Alternative does not meet the basic project purpose or criteria and is therefore not considered a practicable alternative.

#### *Alternative 2) Develop the proposed industrial facility on the Preferred Site (Preferred Alternative)*

Under the Preferred Alternative, the Applicant would develop the site with the proposed industrial distribution center. The Preferred Alternative requires direct impacts to 133,813 square feet (3.071 acres) of low functioning, primarily Category IV wetlands and approximately 6,705 linear feet of ditch. In addition, approximately 12,399 square feet (0.284 acres) of indirect wetland impacts and 2,258 square feet (0.051 acre) of stream buffer impacts are also unavoidable. The proposed project has been designed to minimize impacts to the onsite critical areas with downstream waters associated with offsite Berwick and Dillenbaugh Creeks.

#### *Alternative 3) Develop the proposed industrial facility on Site 8*

Under Alternative 3, the Applicant would develop Site 8 with the proposed industrial distribution center. Site 8 contains two centrally located mapped streams, and ditched water channels are clearly visible on aerial imagery in the locations of these mapped streams. The site consists of 5 parcels that would have to be available in order for the Applicant to use the site. Approximately 12.6 acres in the southeast corner of the site would likely be unavailable for use by an industrial facility due to the mapped stream that cuts off this corner from the remaining portions of the subject property. Lewis County Tax Parcel 017867005000 is similarly divided by a mapped stream. Approximately 16.33 acres of potential wetlands are onsite, 10.9 acres of which are centrally located on the site between the two stream channels. If the site were available, up to 10.9 acres of wetlands may have to be directly impacted to order to develop the site to meet the proposed project purpose while avoiding direct impacts to the stream channels. In addition, Lewis County Tax Parcel 017867010000 is currently designated as “Designated Forest Land” under the Lewis County Designated Forest Land program. Conversion of this tax parcel to industrial use may generate land use conflicts.



### 3.4 Environmental Analysis

The No Action Alternative does not meet the project need or purpose as no industrial development would occur in the Port of Chehalis District as a result of the proposed project. Avoiding all impacts to wetlands would not be feasible while achieving industrial development on the Preferred Site. Under the Preferred Alternative, a warehouse distribution center building and associated infrastructure could be developed on the Preferred Site to meet the project purpose and need. The Preferred Alternative requires direct impacts to 133,813 square feet (3.071 acres) of low functioning, primarily Category IV wetlands and approximately 6,705 linear feet of ditch. In addition, approximately 12,399 square feet (0.284 acres) of indirect wetland impacts and 2,258 square feet (0.051 acre) of stream buffer impacts are also unavoidable. Under Alternative 3, Site 8 would be developed for the proposed 1,001,615-square-foot warehouse distribution center and associated infrastructure. Two mapped stream channels are located on Site 8. To avoid direct impacts to the two mapped stream channels onsite, the proposed project would be required to centrally locate the warehouse distribution center onsite, resulting in direct impacts of up to 10.9 acres of potential wetlands mapped onsite. Site 8 is not currently identified as available and is likely not a practicable alternative as the site consists of four tax parcels that would have to be acquired in order to provide a suitable site. However, if Site 8 were to become available, development of Site 8 for the proposed project (Alternative 3) would likely require greater environmental impacts. As such, the Preferred Alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA).

## Chapter 4. Conclusion

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The City of Chehalis is the second largest incorporated city in Lewis County, and the Port of Chehalis recently renewed the Regional General Permit 9 (RGP-9) with USACE to support the creation of shovel-ready, industrial jobs within the Port District (ELS, 2017). Due to the presence of a mapped floodplain onsite, the proposed project likely does not meet the requirements of the RGP-9. However, the purpose of the proposed project meets the need for industrial development in Lewis County as stated during the RGP-9 renewal process.

Several sites within the Preferred Area for industrial development were assessed for practicability for the proposed warehouse distribution site; Sites 1-7 and 9 were determined to be not practicable. The Preferred Site and Site 8 meet the criteria for the proposed project; however Site 8 is not currently listed as available. Based on field investigation of the Preferred Site and mapped critical areas on Site 8, both sites are encumbered with wetlands and direct wetland impacts would be required in order to develop either site for industrial purposes. Site 8 is encumbered with two centrally located mapped streams that would constrain the location of a distribution center in order to avoid direct impacts to these channels. This central location of the distribution center would require up to 10.9 acres of direct wetland impacts. The Preferred Alternative limits direct impacts to 133,813 square feet (3.071 acres) of low functioning, primarily Category IV wetlands and approximately 6,705 linear feet of ditch. In addition, approximately 12,399 square feet (0.284 acres) of indirect wetland impacts and 2,258 square feet (0.051 acre) of stream buffer impacts are also unavoidable. The total direct and indirect wetland impacts less under the Preferred Alternative than under Site 8 development (Alternative 3); the Preferred Alternative is therefore the LEDPA. While the Preferred Alternative does require direct and indirect wetland impacts, this project will include the purchase of credits from the CBWMB, which will comply with local, state, and federal mitigation requirements and interagency guidance to meet the needs of the greater watershed. Refer to Appendix B for the proposed site plan. These mitigation actions are presented in SVC's *Wetland and Fish and Wildlife Habitat Assessment and Conceptual Mitigation Plan* presented under separate cover. Therefore, long-term aquatic area functions within the Upper Chehalis watershed will not be negatively altered by the *Preferred Alternative* for the proposed distribution center.

## Chapter 5. References

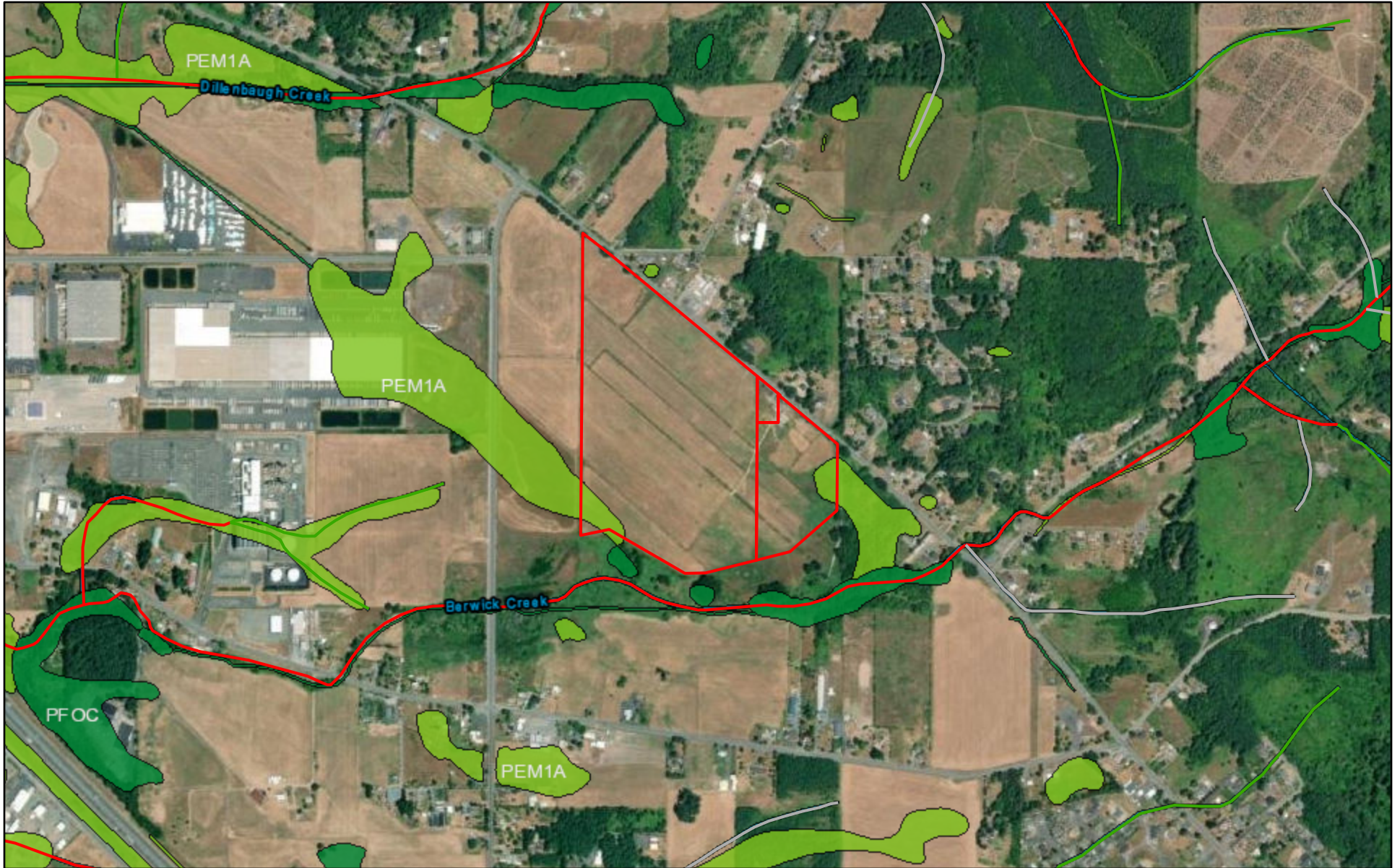
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- Ecological Land Services. 2017. NWS-2008-549 Chehalis, Port Of | Alternatives Analysis Update for Regional General Permit-9 Reissuance. April 2017.
- U.S. Environmental Protection Agency (EPA). 2010. Website: CWA Section 404(b)(1) Guidelines (40 CFR 230). <https://www.epa.gov/cwa-404/cwa-section-404b1-guidelines-40-cfr-230>.
- EPA. 2019. Memorandum: Appropriate Level of Analysis Required for Evaluating Compliance with the CWA Section 404(b)(1) Guidelines Alternatives Requirements. Website: <https://www.epa.gov/cwa-404/memorandum-appropriate-level-analysis-required-evaluating-compliance-cwa-section-404b1>.
- Soundview Consultants LLC. 2020. *Wetland and Fish and Wildlife Habitat Assessment and Conceptual Mitigation Plan*. Prepared October 10, 2020.
- U.S. Army Corps of Engineers (USACE) and EPA. 2008. Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. Federal Register. Volume 73, Number 70 (33 CFR Parts 325 & 332, 40 CFR Part 230)
- USACE. 2003. *Alternatives Analysis Guidance*. USACE. Seattle District. October 23, 2003.

# **Appendix A — Alternative Locations Analysis Exhibit**

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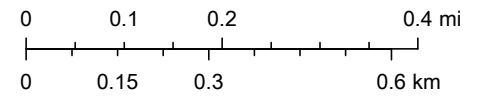
# Preferred Site



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- Type F
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- Estuarine and Marine Wetland

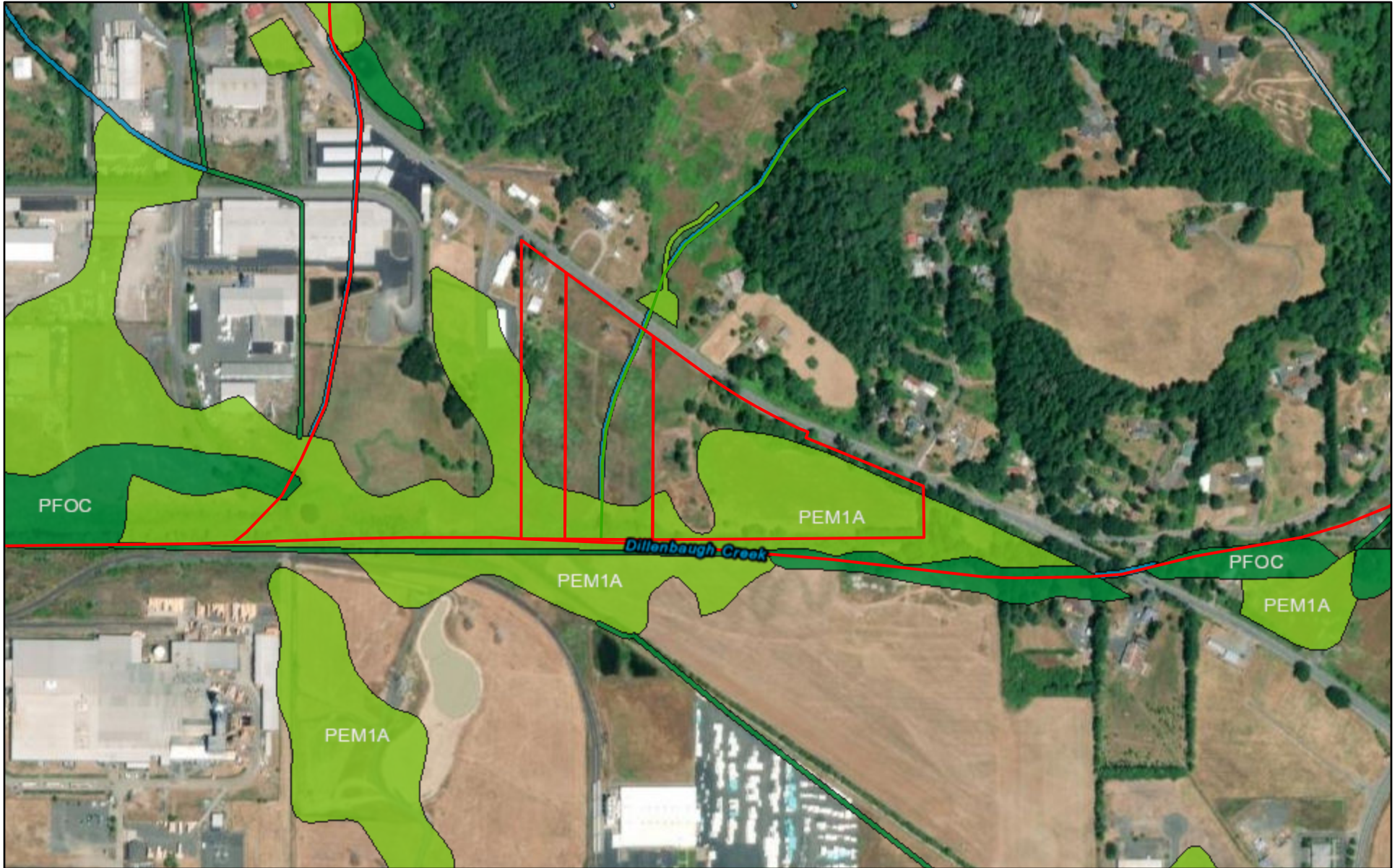
1:18,056



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

# Site 1



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Site 1

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Type F

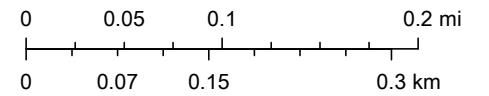
Type N, Np, Ns Wetlands

U, unknown

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

1:9,028



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

# Site 2



4/29/2021, 9:34:55 AM

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Type F  
 Type N, Np, Ns

Wetlands

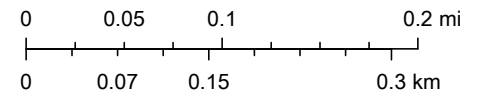
Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

1:9,028



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

# Site 3



4/29/2021, 9:54:02 AM

Site 3

DNR - Stream Typing - Watercourses (DNR) Wetlands

Type F

Type N, Np, Ns

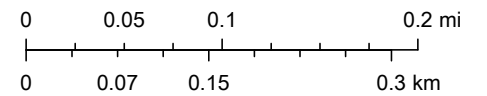
Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

1:9,028

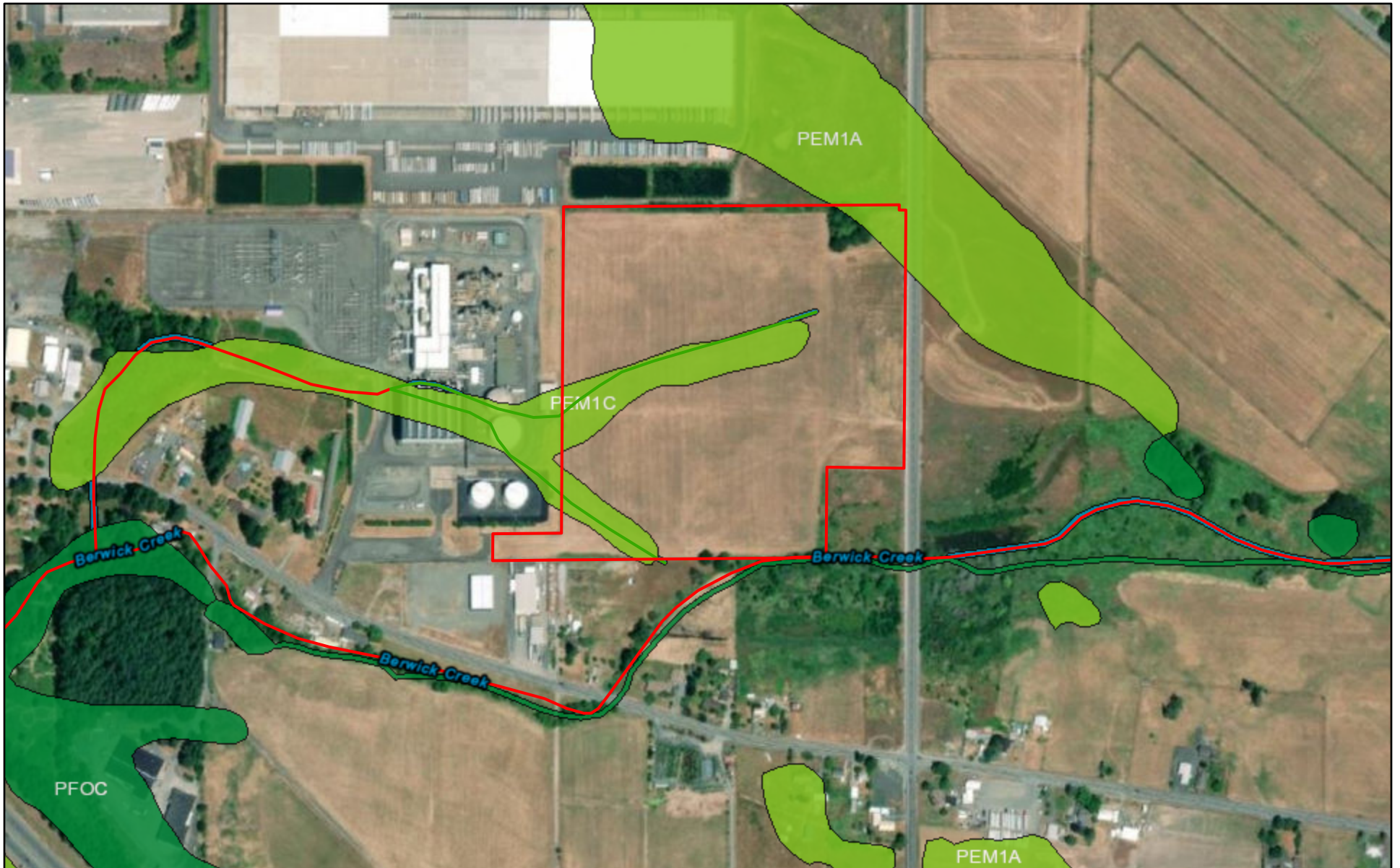


U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants



# Site 4



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Site 4

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Type F

Type N, Np, Ns

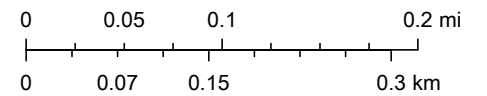
Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

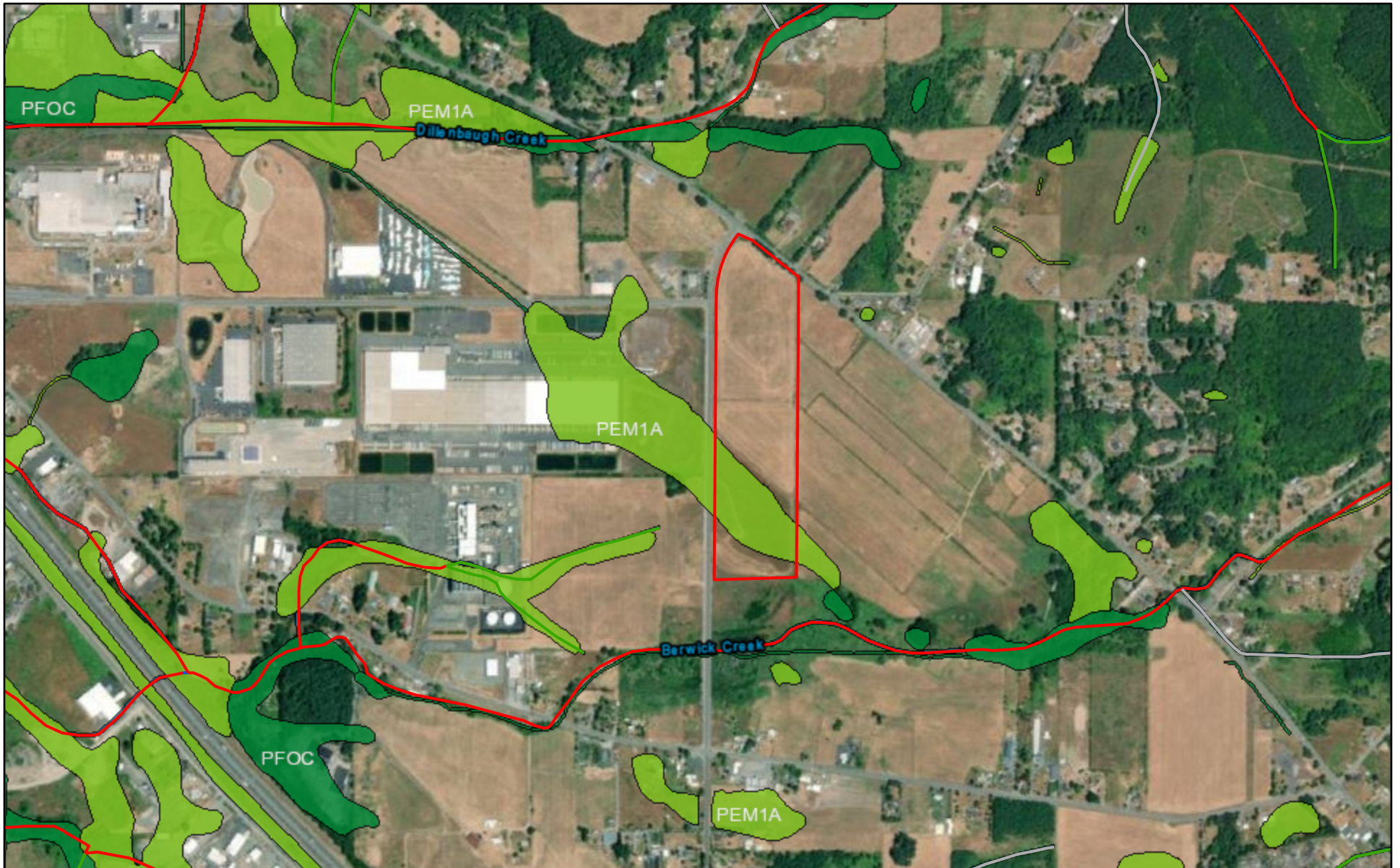
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U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

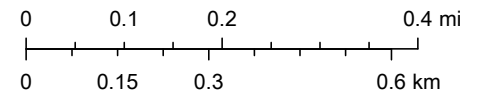
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  - Type F
  - Type N, Np, Ns
  - Type S
  - U, unknown
- Wetlands**
- Estuarine and Marine Deepwater
  - Estuarine and Marine Wetland

1:18,056



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

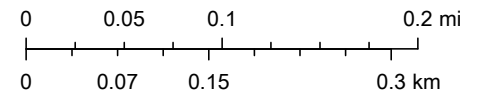
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- DNR - Stream Typing - Watercourses (DNR)
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- Estuarine and Marine Wetland

1:9,028



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

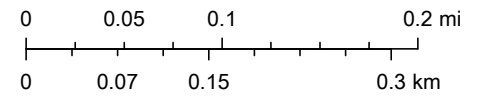
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- Type F
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

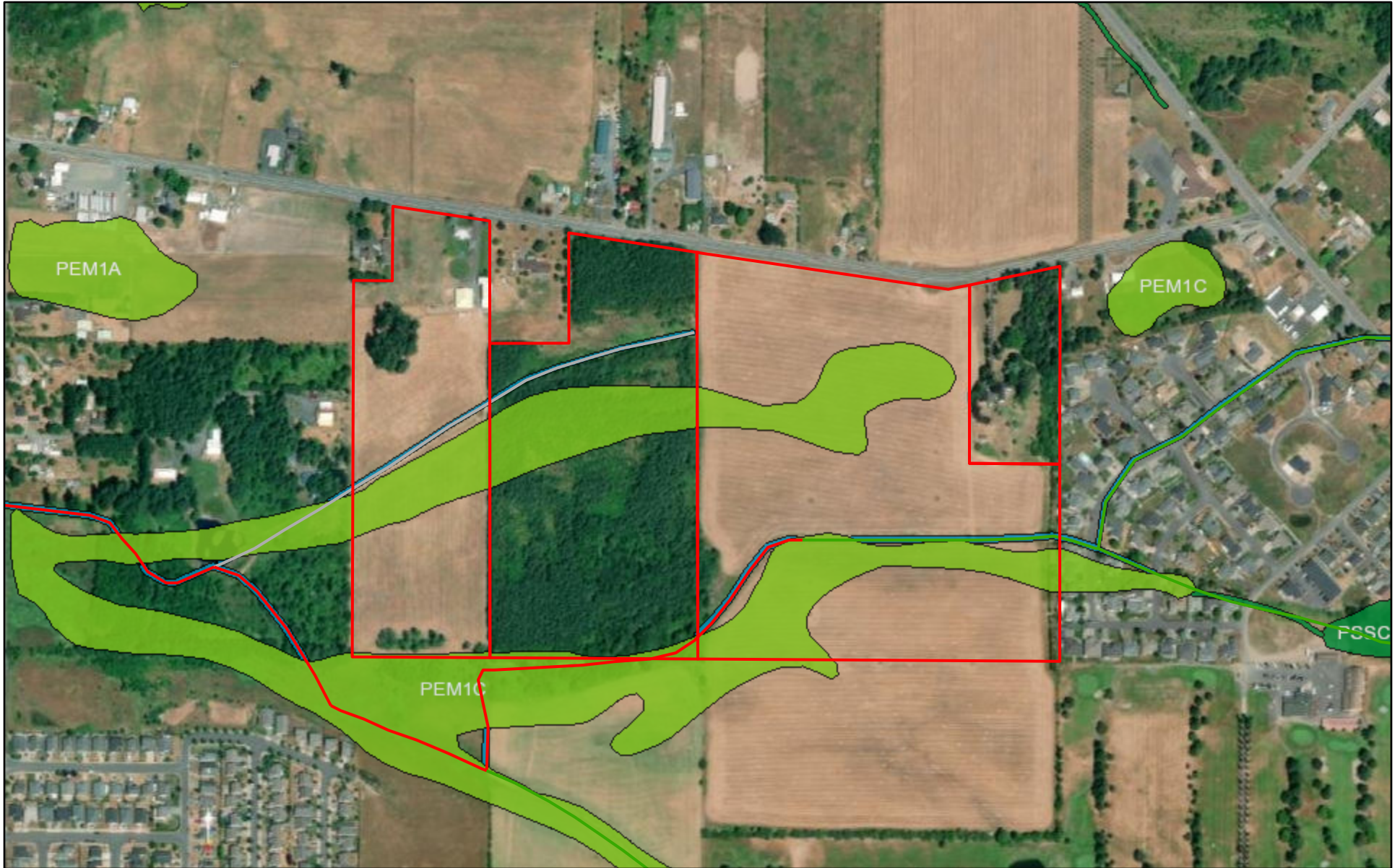
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U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

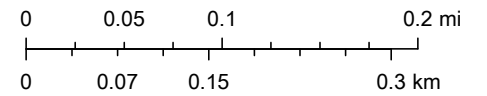
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- Type F
- Estuarine and Marine Wetland

1:9,028



U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

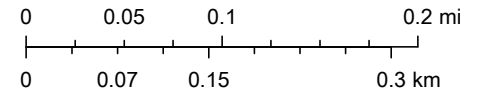
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- |  |   |   |
|--|---|---|
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| <span style="border-bottom: 2px solid green; width: 20px; margin-right: 5px;"></span> DNR - Stream Typing - Watercourses (DNR) | <span style="border-bottom: 2px solid lightgreen; width: 20px; margin-right: 5px;"></span> Type N, Np, Ns | <span style="display: inline-block; width: 10px; height: 10px; background-color: #0070C0; border: 1px solid black; margin-right: 5px;"></span> Estuarine and Marine Deepwater |
| <span style="border-bottom: 2px solid blue; width: 20px; margin-right: 5px;"></span> Type S                                    | <span style="border-bottom: 2px solid gray; width: 20px; margin-right: 5px;"></span> U, unknown           | <span style="display: inline-block; width: 10px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Estuarine and Marine Wetland   |

1:9,028



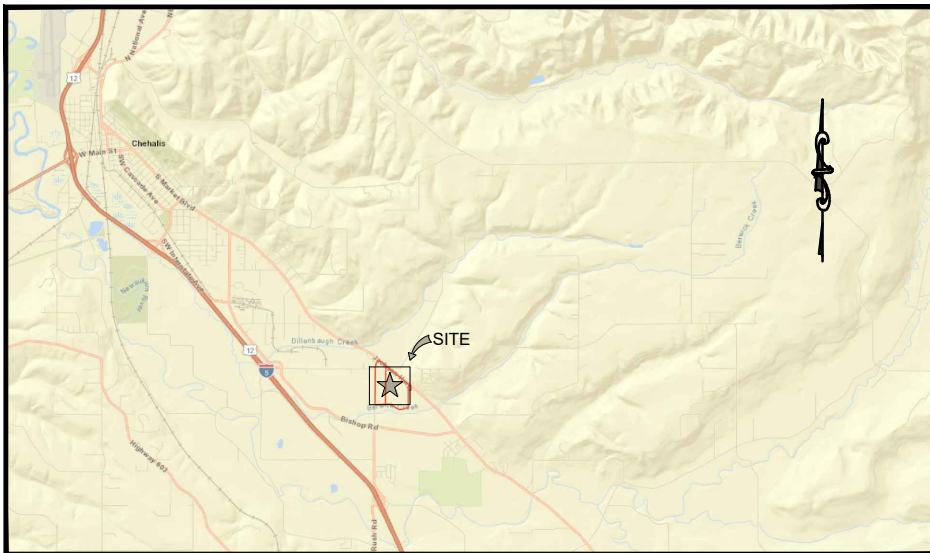
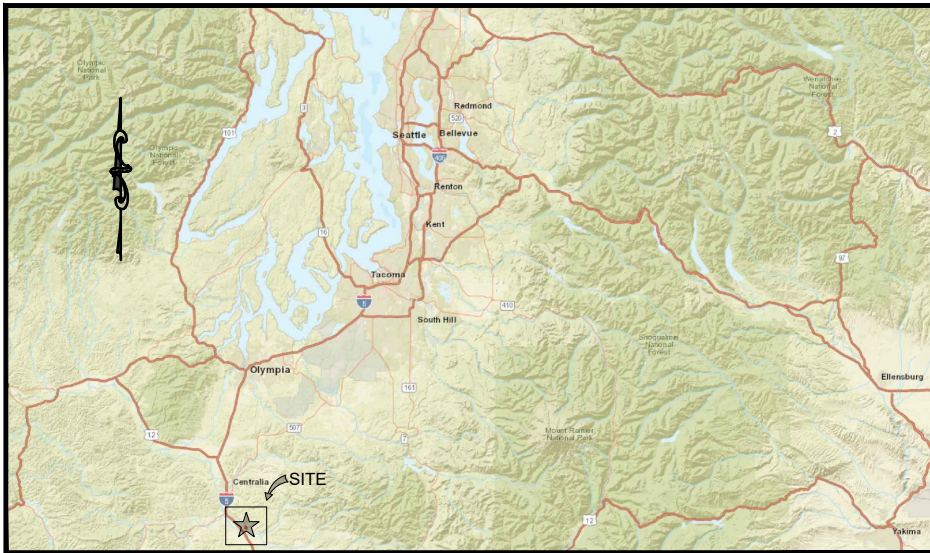
U.S. Fish and Wildlife Service, National Standards and Support Team,

Soundview Consultants

# Appendix B — Proposed Project

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# JACKSON HIGHWAY - VICINITY MAP



## ADJACENT PROPERTY OWNERS:

1. NORTHWEST PIPELINE CORPORATION
2. PORT OF CHEHALIS
3. PORT OF CHEHALIS

  
**Soundview Consultants LLC**  
 Environmental Assessment • Planning • Land Use Solutions  
 2907 Harborview Drive, Suite D P. 253.514.8952  
 Gig Harbor, Washington 98335 F. 253.514.8954  
[WWW.SOUNDVIEWCONSULTANTS.COM](http://WWW.SOUNDVIEWCONSULTANTS.COM)

**JACKSON HIGHWAY**  
 2844 JACKSON HIGHWAY  
 CHEHALIS, WA 98532

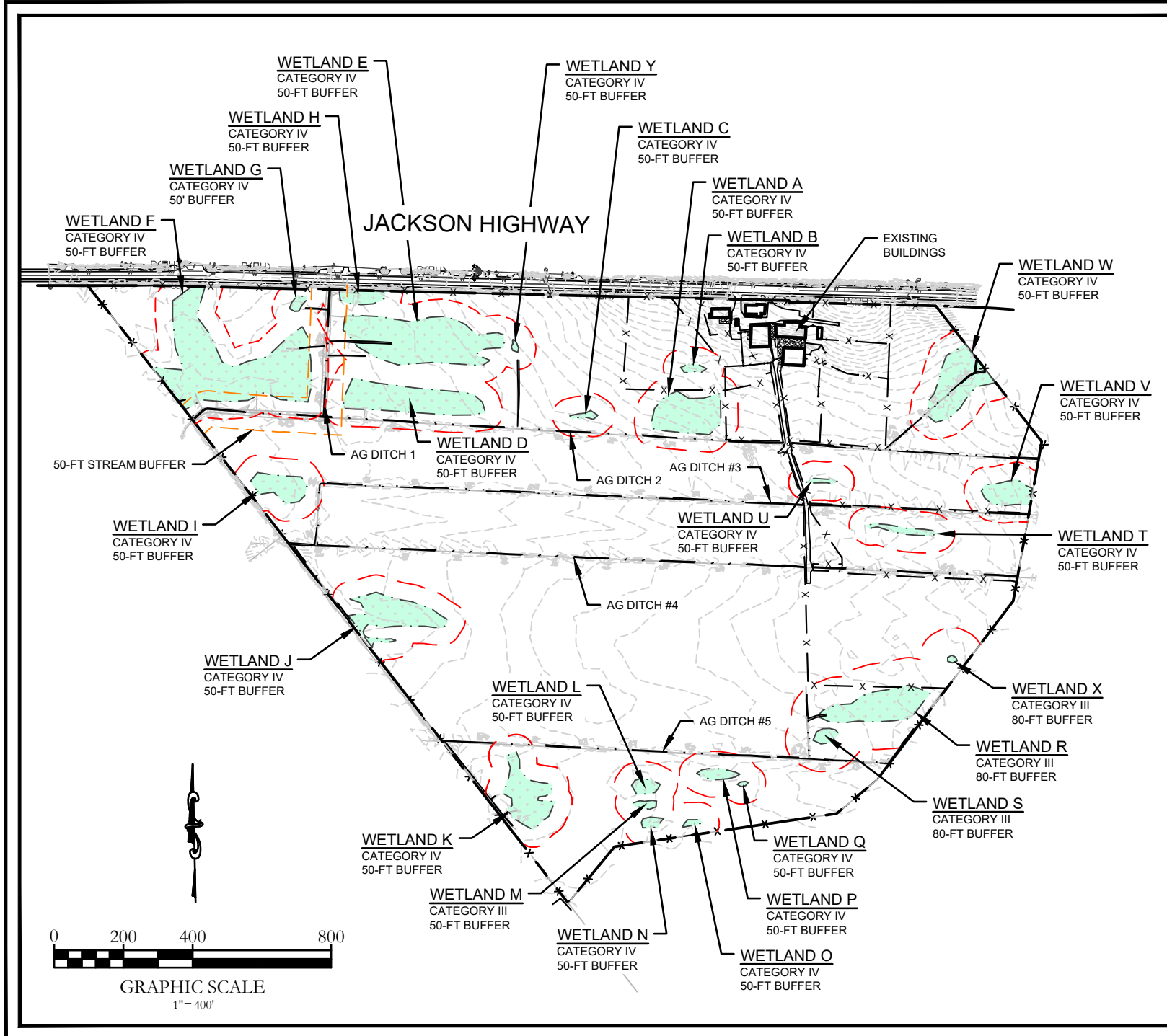
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**APPLICANT:**  
 JOEL MOLANDER  
 PUGET WESTERN, INC.  
**PROPOSED PROJECT:**  
 INDUSTRIAL REDEVELOPMENT  
 OF THE SUBJECT PROPERTY TO  
 INCLUDE A WAREHOUSE  
 FACILITY WITH ASSOCIATED  
 PARKING, STORMWATER  
 FACILITIES, AND  
 INFRASTRUCTURE.

|   |                     |
|---|---------------------|
| REFERENCE NUMBER<br>NWS-2015-259                                    |                     |
| LOCATION<br>THE SE 1/4 OF SECTION 11, TOWNSHIP 13N, RANGE 02E, W.M. |                     |
| LAT:<br>46° 37' 26.86"  | DATE:<br>12/18/2020 |
| LONG:<br>122° 54' 6.79"   | JOB:<br>1244.0001   |
| NEAR/AT:<br>CHEHALIS  | BY:<br>MW           |
| COUNTY:<br>LEWIS  | SCALE:<br>N.T.S.    |
| STATE:<br>WA  | SHEET:<br>1 OF 6    |



# JACKSON HIGHWAY - EXISTING CONDITIONS



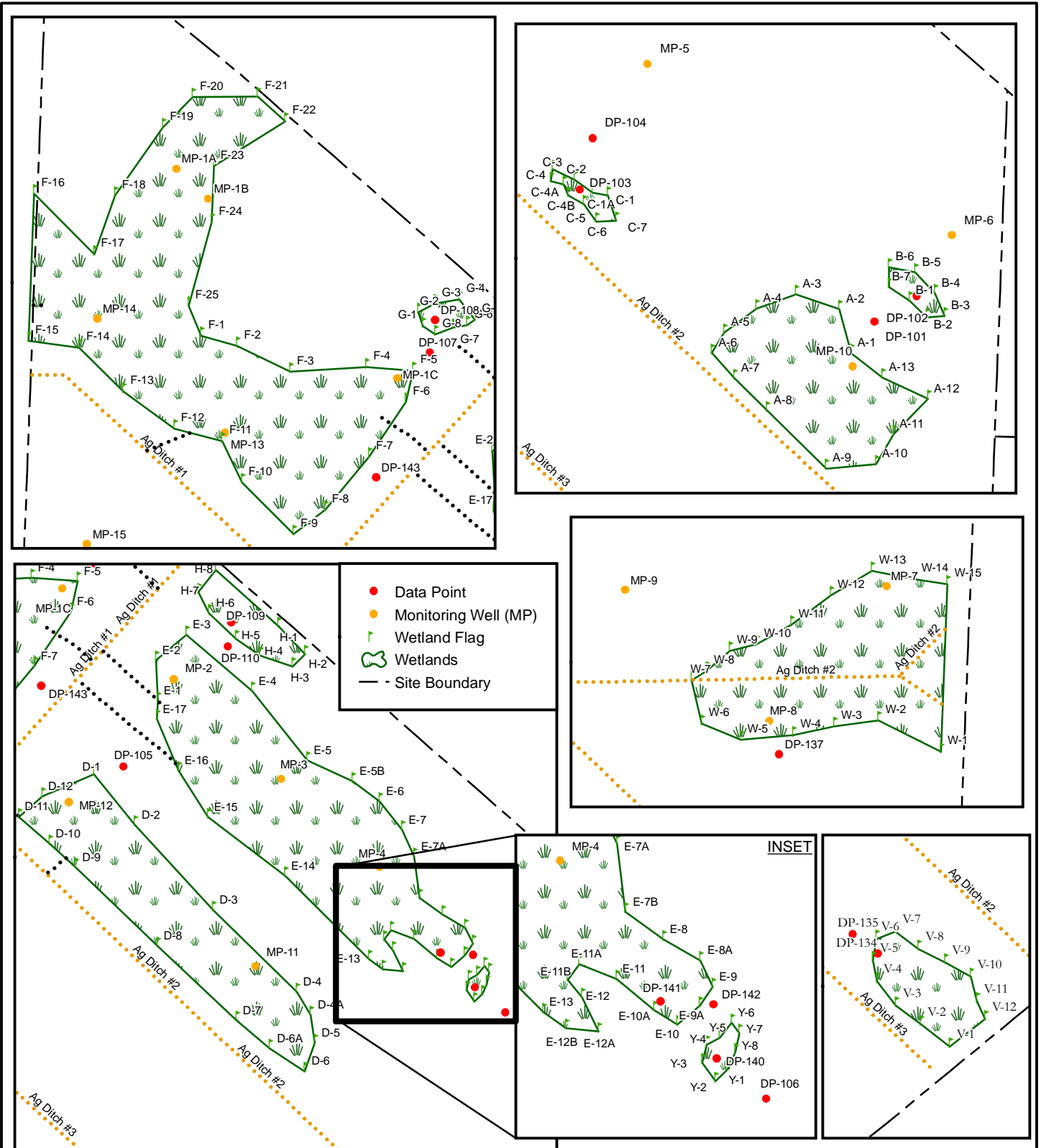

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F. 253.514.8954  
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**JACKSON HIGHWAY**  
2844 JACKSON HIGHWAY  
CHEHALIS, WA 98532

**PARCEL NUMBERS**  
17800001009, 17800001010, 17800003000

|  |   |  |   |
|--|---|--|---|
| <b>REFERENCE NUMBER:</b><br>NWS-2015-259 | <b>APPLICANT:</b><br>JOEL MOLANDER<br>PUGET WESTERN, INC. | <b>PROPOSED PROJECT:</b><br>INDUSTRIAL REDEVELOPMENT OF THE PROPERTY<br>TO INCLUDE AN WAREHOUSE, STORMWATER<br>FACILITIES, AND INFRASTRUCTURE. | <b>LOCATION:</b><br>THE SE 1/4 OF SECTION 11, TOWNSHIP 12N, RANGE 02E, W.M. |
| <b>DATE:</b><br>09/18/2020               |   |  | <b>SHEET:</b><br>2 OF 6   |

# PUGET WESTERN JACKSON - EXISTING NORTH EXTENT



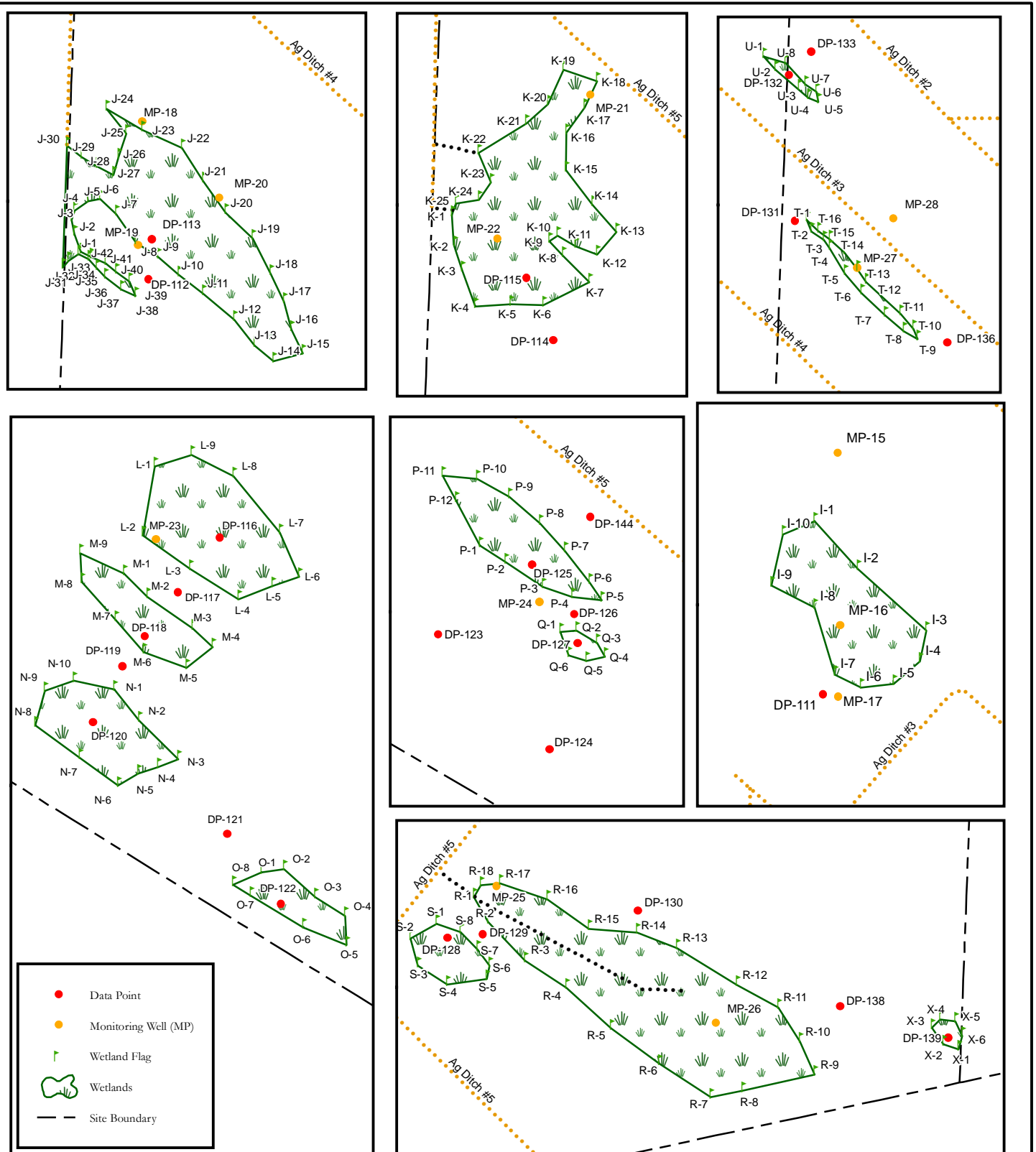
**Soundview Consultants LLC**  
 Environmental Assessment • Planning • Land Use Solutions  
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335  
 Phone: (253) 514-8952 Fax: (253) 514-8954  
[www.soundviewconsultants.com](http://www.soundviewconsultants.com)

JACKSON HIGHWAY  
 2844 JACKSON HIGHWAY  
 CHEHALIS, WA 98532

PARCEL NUMBERS  
 17800001009, 17800001010, 17800003000

|   |
|---|
| REFERENCE NUMBER:<br>NWS-2015-259   |
| APPLICANT:<br>JOEL MOLANDER<br>PUGET WESTERN, INC.  |
| PROPOSED PROJECT:<br>INDUSTRIAL REDEVELOPMENT OF THE PROPERTY TO INCLUDE AN WAREHOUSE, STORMWATER FACILITIES, AND INFRASTRUCTURE. |
| LOCATION:<br>THE SE 1/4 OF SECTION 11, TOWNSHIP 13N, RANGE 02E, W.M.  |
| SHEET:<br>3 OF 6  |
| DATE:<br>09/03/2020   |

# PUGET WESTERN JACKSON - EXISTING SOUTH EXTENT



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 Environmental Assessment • Planning • Land Use Solutions  
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335  
 Phone: (253) 514-8952 Fax: (253) 514-8954  
[www.soundviewconsultants.com](http://www.soundviewconsultants.com)

JACKSON HIGHWAY  
 2844 JACKSON HIGHWAY  
 CHEHALIS, WA 98532

PARCEL NUMBERS  
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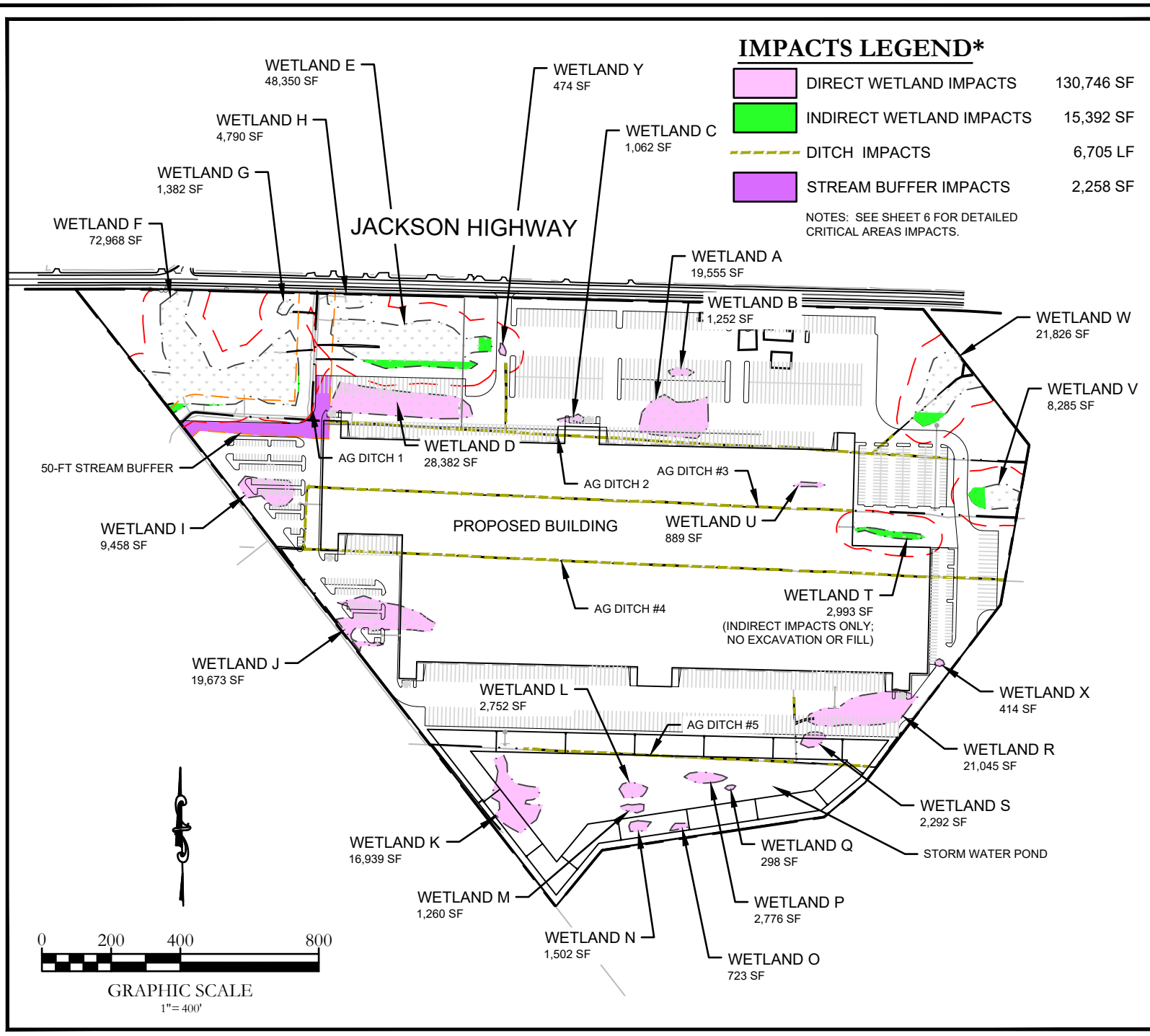
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|---|
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| APPLICANT:<br>JOEL MOLANDER<br>PUGET WESTERN, INC.  |
| PROPOSED PROJECT:<br>INDUSTRIAL REDEVELOPMENT OF THE PROPERTY<br>TO INCLUDE AN WAREHOUSE, STORMWATER<br>FACILITIES, AND INFRASTRUCTURE. |
| LOCATION:<br>THE SE 1/4 OF SECTION 11, TOWNSHIP 13N, RANGE 02E, W.M.  |
| SHEET: 4 OF 6   |
| DATE:<br>09/03/2020   |

# JACKSON HIGHWAY - PROPOSED CONDITIONS

## IMPACTS LEGEND\*

|  |                          |            |
|--|--------------------------|------------|
|  | DIRECT WETLAND IMPACTS   | 130,746 SF |
|  | INDIRECT WETLAND IMPACTS | 15,392 SF  |
|  | DITCH IMPACTS            | 6,705 LF   |
|  | STREAM BUFFER IMPACTS    | 2,258 SF   |

NOTES: SEE SHEET 6 FOR DETAILED CRITICAL AREAS IMPACTS.







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 Gig Harbor, Washington 98335  
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 F. 253.514.8954  
 WWW.SOUNDVIEWCONSULTANTS.COM

**JACKSON HIGHWAY**  
 2844 JACKSON HIGHWAY  
 CHEHALIS, WA 98532

PARCEL NUMBERS  
 17800001009, 17800001010, 17800003000

|                                   |  |  |  |
|-----------------------------------|--|--|--|
| REFERENCE NUMBER:<br>NWS-2015-259 | APPLICANT:<br>JOEL MOLANDER<br>PUGET WESTERN, INC. | PROPOSED PROJECT:<br>INDUSTRIAL, REDEVELOPMENT OF THE PROPERTY TO INCLUDE AN WAREHOUSE, STORMWATER FACILITIES, AND INFRASTRUCTURE. | LOCATION:<br>THE SE 1/4 OF SECTION 11, TOWNSHIP 1 N, RANGE 02E, W.M. |
| DATE:<br>12/18/2020               |  |  | SHEET:<br>5 OF 6   |

## IMPACTS LEGEND

|   |                                 |                   |
|---|---------------------------------|-------------------|
|    | <b>DIRECT WETLAND IMPACTS</b>   | <b>130,746 SF</b> |
|   | WETLAND A                       | 19,555 SF         |
|   | WETLAND B                       | 1,252 SF          |
|   | WETLAND C                       | 1,062 SF          |
|   | WETLAND D                       | 28,382 SF         |
|   | WETLAND I                       | 9,458 SF          |
|   | WETLAND J                       | 19,673 SF         |
|   | WETLAND K                       | 16,939 SF         |
|   | WETLAND L                       | 2,752 SF          |
|   | WETLAND M                       | 1,260 SF          |
|   | WETLAND N                       | 1,502 SF          |
|   | WETLAND O                       | 723 SF            |
|   | WETLAND P                       | 2,776 SF          |
|   | WETLAND Q                       | 298 SF            |
|   | WETLAND R                       | 21,045 SF         |
|   | WETLAND S                       | 2,292 SF          |
|   | WETLAND U                       | 889 SF            |
|   | WETLAND X                       | 414 SF            |
|   | WETLAND Y                       | 474 SF            |
|    | <b>INDIRECT WETLAND IMPACTS</b> | <b>15,392 SF</b>  |
|   | WETLAND E                       | 7,032 SF          |
|   | WETLAND F                       | 1,031 SF          |
|   | WETLAND T                       | 2,993 SF          |
|   | WETLAND U                       | 2,099 SF          |
|   | WETLAND W                       | 2,237 SF          |
|  | <b>DITCH IMPACTS</b>            | <b>6,705 LF</b>   |
|   | AG DITCH #2                     | 2,042 LF          |
|   | AG DITCH #3                     | 1,733 LF          |
|   | AG DITCH #4                     | 2,006 LF          |
|   | AG DITCH #5                     | 924 LF            |
|  | <b>STREAM BUFFER IMPACTS</b>    | <b>2,258 SF</b>   |



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 Gig Harbor, Washington 98335 F. 253.514.8954  
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JACKSON HIGHWAY  
 2844 JACKSON HIGHWAY  
 CHEHALIS, WA 98532  
 PARCEL NUMBERS  
 17800001009, 17800001010, 17800003000

NWS-2015-259  
 APPLICANT:  
 JOEL MOLANDER  
 PUGET WESTERN, INC.  
 PROPOSED PROJECT:  
 INDUSTRIAL REDEVELOPMENT OF THE PROPERTY  
 TO INCLUDE AN WAREHOUSE, STORMWATER  
 FACILITIES, AND INFRASTRUCTURE.  
 LOCATION:  
 THE SE 1/4 OF SECTION 11, TOWNSHIP 1N, RANGE 02E, W.M.  
 SHEET:  
 6 OF 6  
 DATE:  
 09/18/2020

# Attachment B – Joint Public Notice

---



US Army Corps  
of Engineers  
Seattle District



WASHINGTON STATE  
DEPARTMENT OF  
ECOLOGY

# Joint Public Notice

## Application for a Department of the Army Permit and a Washington Department of Ecology Water Quality Certification

**US Army Corps of Engineers**  
Regulatory Branch  
Post Office Box 3755  
Seattle, WA 98124-3755  
Telephone: (206) 316-3049  
ATTN: Mr. Evan Carnes,  
Senior Project Manager

**WA Department of Ecology**  
SEA Program  
Post Office Box 47600  
Olympia, WA 98504-7600  
Telephone: (360) 407-6076  
ATTN: SEA Program,  
Federal Permit Coordinator

**Public Notice Date:** November 24, 2020  
**Expiration Date:** December 24, 2020

**Reference No.:** NWS-2015-259  
**Name:** Puget Western, Inc.

---

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps) and the Washington Department of Ecology (Ecology) have received an application to perform work in waters of the U.S. as described below and shown on the enclosed revised drawings dated November 4, 2020.

The Corps will review the work in accordance with Section 404 of the Clean Water Act (CWA). Ecology will review the work pursuant to Section 401 of the CWA, with applicable provisions of State water pollution control laws.

**APPLICANT:** Puget Western, Inc.  
Attention: Mr. Joel Molander  
Post Office Box 1529  
Bothell, Washington 98041  
Telephone: (425) 765-8002

**AGENT:** Soundview Consultants, LLC  
Attention: Ms. Racheal Villa  
2907 Harborview Drive, Suite D  
Gig Harbor, Washington 98335  
Telephone: (253) 514-8952

**LOCATION:** In wetlands near 2844 Jackson Highway, near Chehalis, Lewis County, Washington.

**WORK:** The applicant proposes to discharge up to 4,956 cubic yards of native soil into no more than 3.07 acres of wetlands and 6,705 linear feet of ditches, to construct an industrial development. The proposed 23-acre warehouse distribution center would include associated infrastructure such as loading docks, trailer stalls, paved areas for parking, truck and van loading, and maneuvering, and stormwater management. Ingress and egress to the site would occur via entrances and exits along Jackson Highway on the northeastern portion of the subject property.

**PURPOSE:** To provide industrial facilities within the urban growth area associated with the City of Chehalis, Lewis County.

**NWS-2015-259; Puget Western, Inc.**

**ADDITIONAL INFORMATION:** The wetland boundaries shown on the project drawings have not yet been verified by the Corps. If the Corps determines the boundaries of the wetlands are substantially inaccurate a new public notice may be published.

**MITIGATION:** To compensate for unavoidable direct and indirect impacts to 3.35 acres of wetlands, 6,705 linear feet of ditches, and 0.05 acre of buffer, the applicant has proposed to purchase credits from the Chehalis Basin Wetland Mitigation Bank.

**ENDANGERED SPECIES:** A preliminary determination indicates that the activity would not affect endangered or threatened species, or their critical habitat. Consultation under Section 7 of the ESA is not required.

**ESSENTIAL FISH HABITAT:** The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). If the Corps determines that the proposed action may adversely affect EFH for federally managed fisheries in Washington waters, the Corps will initiate EFH consultation with the NMFS. The Corps' final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

**CULTURAL RESOURCES:** The Corps has reviewed the latest published version of the National Register of Historic Places, Washington Information System for Architectural and Archaeological Records Data and other sources of information. The permit area is likely to contain historic properties eligible for inclusion in the National Register. An investigation for the presence of eligible historic properties is justified. The Corps invites responses to this public notice from Native American Tribes or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns regarding historic properties and sites of religious and cultural significance at or near the project area. After receipt of comments from this public notice, the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the National Historic Preservation Act, as appropriate.

**PUBLIC HEARING:** Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

**EVALUATION – CORPS:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Native American Nations or tribal governments; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement



**NWS-2015-259; Puget Western, Inc.**

pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

The described discharge will be evaluated for compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the CWA. These guidelines require an alternatives analysis for any proposed discharge of dredged or fill material into waters of the United States.

SOURCE OF FILL MATERIAL: The source of the fill material would be native soils from on-site or clean imported fill from approved sources.

EVALUATION – ECOLOGY: Ecology is soliciting comments from the public; Federal, Native American Nations or tribal governments, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Ecology will be considering all comments to determine whether to certify or deny Section 401 water quality certification for the proposed project.

COMMENT AND REVIEW PERIOD: Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether authorizing the work would not be contrary to the public interest. In order to be accepted, e-mail comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the permit applicant's name and reference number as shown below. Either conventional mail or e-mail comments must include the permit applicant's name and reference number, as shown below, and the commenter's name, address, and phone number. All comments whether conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration.

CORPS COMMENTS: All e-mail comments should be sent to [evan.g.carnes@usace.army.mil](mailto:evan.g.carnes@usace.army.mil). Conventional mail comments should be sent to: U.S. Army Corps of Engineers, Regulatory Branch, Attention Mr. Evan Carnes, P.O. Box 3755, Seattle, Washington 98124-3755. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act including any personally identifiable information such as names, phone numbers, and addresses.

ECOLOGY COMMENTS: Any person desiring to present views on the project pertaining to a request for water quality certification under Section 401 of the CWA, may do so by submitting written comments to the following address: Washington State Department of Ecology, Attention: Federal Permit Coordinator, Post Office Box 47600, Olympia, Washington 98504-7600, or e-mail to [ecyrefedpermits@ecy.wa.gov](mailto:ecyrefedpermits@ecy.wa.gov).

To ensure proper consideration of all comments, responders must include the following name and reference number in the text of their comments: NWS-2015-259; Puget Western, Inc.

Encl: Figures (6)

## Attachment C – Qualifications

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### **Racheal Villa**

Associate Principal and Senior Fisheries Biologist

Professional Experience: 15 years

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Racheal Villa is an Associate Principal and Senior Fisheries Biologist with a diverse background in both freshwater and marine ecology with emphasis in salmonid life histories and habitat. She has experience in assessing marine, shoreline, stream, and wetland systems, reporting on biological evaluations, permitting, and site assessments.

Racheal earned a Bachelor of Science degree in Fisheries Biology from the University of Washington, Seattle, with additional graduate level training in salmonid behavior and life history; restoration of fish communities and habitats in river ecosystems; biological problems with water pollution; and biomonitoring and assessment.

In addition, she has received formal training in Compensatory Mitigation and Restoration Projects, Determining the Ordinary High Water Mark, the revised Washington State Wetland Rating System, Selecting Wetland Mitigation Sites Using a Watershed Approach from the Washington State Department of Ecology; Biological Assessment Preparation for Transportation Projects from the Washington State Department of Transportation; and Seagrass Biology, Delineation, and Mapping from the United States Army Corps of Engineers. She is also a Pierce County qualified Fisheries Biologist and qualified Wetland Specialist.

### **Rachael Hyland, PWS, Certified Ecologist**

Senior Environmental Scientist

Professional Experience: 9 years

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Rachael Hyland is a Senior Environmental Scientist with extensive wetland and stream delineation and regulatory coordination experience. Rachael has a background in wetland and ecological habitat assessments in various states, most notably Washington, Connecticut, Massachusetts, Rhode Island, and Ohio. She has experience in assessing wetland, stream, riparian, and tidal systems, as well as complicated agricultural and disturbed sites. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; conducts environmental code analysis; and prepares environmental assessment and mitigation reports, biological evaluations, and permit applications to support clients through the regulatory and planning process for various land use projects. She also has extensive knowledge of bats and their associated habitats and white nose syndrome (*Pseudogymnoascus destructans*), a fungal disease affecting bats which was recently documented in Washington.

Rachael earned a Bachelor of Science degree in Ecology and Evolutionary Biology from the University of Connecticut, with additional ecology studies at the graduate level. Rachael is a Professional Wetland Scientist (PWS #3480) through the Society of Wetland Scientists as well as a Certified Ecologist through the Ecological Society of America. She has completed 40-hour wetland delineation training for Western Mountains, Valleys, & Coast and Arid West Regional Supplement, in addition to formal training for the Northcentral and Northeast supplement, and experience with the Midwest, Eastern Mountains and Piedmont, and Atlantic and Gulf Coast supplements. She has also received formal training from the Washington State Department of Ecology in the Using the Revised 2014 Wetland

Rating System for Western Washington, How to Determine the Ordinary High Water Mark, Navigating SEPA, Selecting Wetland Mitigation Sites Using a Watershed Approach, and Wetland Classification. Rachael has also received training from the Washington State Department of Transportation in Biological Assessment Preparation for Transportation Projects and is listed by WSDOT as a junior author for preparing Biological Assessments.

## **Kyla Caddey, PWS, Certified Ecologist**

Senior Environmental Scientist

Professional Experience: 7 years

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Kyla Caddey is a Senior Environmental Scientist with a diverse background in stream and wetland ecology, wildlife ecology and conservation, wildlife and natural resource assessments and monitoring, and riparian habitat restoration at various public and private entities. Kyla has field experience performing in-depth studies in both the Pacific Northwest and Central American ecosystems which included various environmental science research and statistical analysis. Kyla has advanced expertise in federal- and state-listed endangered, threatened, and sensitive species surveys and assessment of aquatic and terrestrial systems throughout the Puget Sound region. She has completed hundreds of wetland delineations and has extensive knowledge and interest in hydric soil identification. As the senior writer, she provides informed project oversight and performs final quality assurance / quality control on various types of scientific reports for agency submittal, including: Biological Assessments/Evaluations; Wetland, Shoreline, and Fish and Wildlife Habitat Assessments; Mitigation Plans, and Mitigation Monitoring Reports. She currently performs wetland, stream, and shoreline delineations and fish and wildlife habitat assessments; prepares scientific reports; and provides environmental permitting and regulatory compliance assistance to support a wide range of commercial, industrial, and multi-family residential land use projects.

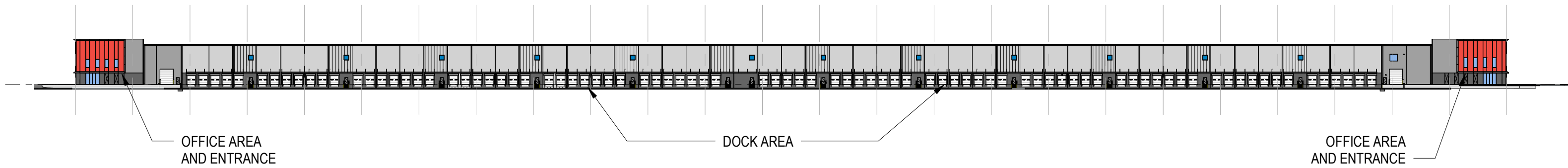
Kyla earned a Bachelor of Science degree in Environmental Science and Resource Management from the University of Washington, Seattle with a focus in Wildlife Conservation and a minor in Quantitative Science. She has also completed additional coursework in Comprehensive Bird Biology from Cornell University. Ms. Caddey is a Certified Professional Wetland Scientist (PWS #3479) through the Society of Wetland Scientists and Certified Ecologist through the Ecological Society of America. She has received 40-hour wetland delineation training (Western Mtns, Valleys, & Coast and Arid West Regional Supplement), is a Pierce County Qualified Wetland Specialist and Wildlife Biologist, and is a USFWS-approved Mazama pocket gopher survey biologist. Kyla has been formally trained through the Washington State Department of Ecology, Coastal Training Program, and the Washington Native Plant Society in winter twig and grass, sedge, and rush identification for Western WA; Using the Credit-Debit Method in Estimating Wetland Mitigation Needs; How to Determine the Ordinary High Water Mark; Using Field Indicators for Hydric Soils; How to Administer Development Permits in Washington Shorelines; Puget Sound Coastal Processes; and Forage Fish Survey Techniques. Additionally, she has received formal training in preparing WSDOT Biological Assessments.

**Attachment 7**

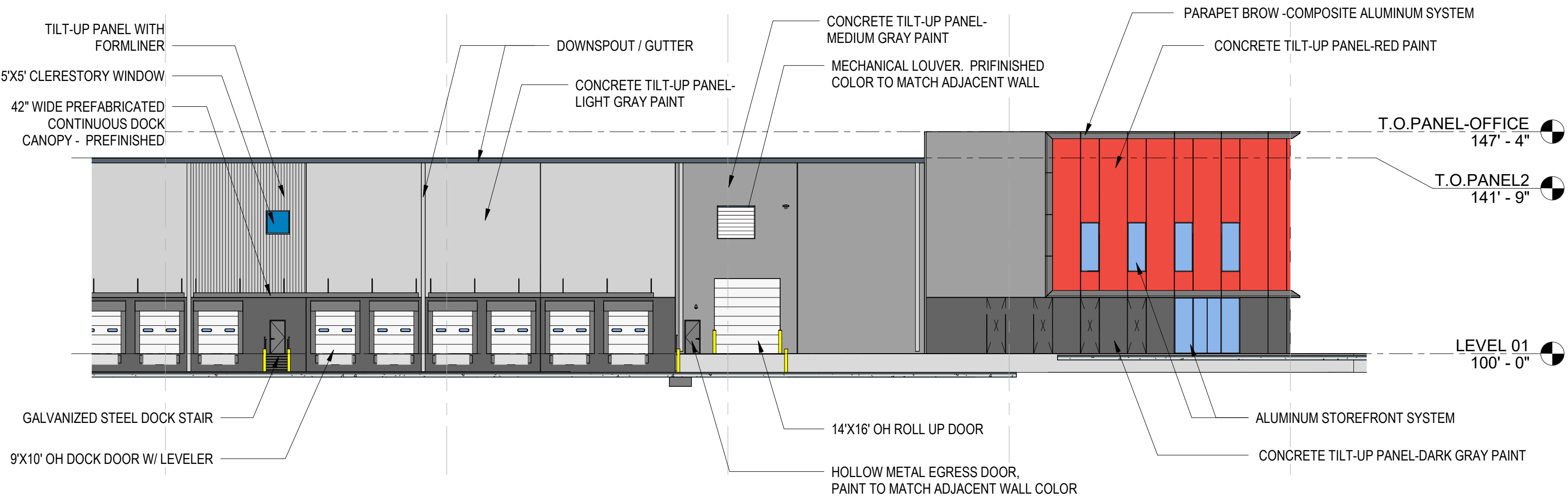
Concept Architectural Renderings Prepared  
by Clayco dated February 18, 2022



PERSPECTIVE VIEW



**EAST ELEVATION -OVERALL**  
SCALE 1"=100'



**EAST ELEVATION -ENLARGED**  
SCALE 1"=20'



## AXONOMETRIC VIEW



## AERIAL PERSPECTIVE VIEW





**AERIAL PERSPECTIVE VIEW**